

Transposition in Monteverdi's Vespers of 1610: An 'Aberration' Defended Author(s): Andrew Parrott Source: *Early Music*, Vol. 12, No. 4, The Early Piano I (Nov., 1984), pp. 490-516 Published by: Oxford University Press Stable URL: <u>http://www.jstor.org/stable/3137979</u> Accessed: 28/10/2013 17:38

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at http://www.jstor.org/page/info/about/policies/terms.jsp

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Oxford University Press is collaborating with JSTOR to digitize, preserve and extend access to Early Music.

http://www.jstor.org

# Andrew Parrott

# Transposition in Monteverdi's Vespers of 1610 An 'aberration' defended



1 Claudio Monteverdi: portrait by Bernardo Strozzi (1584–1644) (Tiroler Landesmuseum Ferdinandeum, Innsbruck)

Ours is an essentially conservative musical climate, and attempts to reproduce historical styles of performance still tend to be viewed with suspicion. It is therefore not surprising that to transpose parts of a recognized masterpiece should be regarded by some almost as an act of heresy. I first directed a performance of Monteverdi's 1610 Vespers in 1977, and on that occasion,1 as on subsequent ones, the psalm Lauda Jerusalem and the Magnificat a 7 were given a 4th below their written pitch. (The discussion that follows is quite independent of absolute pitch standards appropriate to Monteverdi's music: the issue is that of the relative pitch-levels of the various Vespers movements.) Reactions to the idea of the transpositions have been predictably mixed: one of our best-known Monteverdi conductors has described them as an

490 EARLY MUSIC NOVEMBER 1984

'aberration',<sup>2</sup> while others find the results revelatory. But if the very familiarity of the work makes objective assessment difficult, it has the advantage of focusing attention on a vital but neglected area of historical performance practice, one of direct relevance to a host of less well-known pieces. With the release of my recording of the 1610 Vespers,<sup>3</sup> the time is obviously ripe for a detailed defence of the practice.

Monteverdi has had the misfortune to be labelled a Baroque composer and a Venetian composer, despite the facts that he published six collections before the 17th century even began and that he worked in Mantua until he was 45. Consequently his music has often been viewed in a false light. Instrumental writing of the kind illustrated in ex.1 would perhaps have seemed unexceptional in its technical demands to a musician of the early 18th century; in 1610 it would undoubtedly have seemed revolutionary in its high tessitura. And there lies the crux of the matter. Do the high vocal and instrumental ranges of the Magnificat a 7 serve a new dramatic function through an (as it were) Beethovenian stretching of existing conventions? Or is this all an illusion, caused by a trick of notation that would have ruffled none of Monteverdi's contemporaries?

#### Ex.1 Monteverdi, Vespers (1610), Magnificat a 7, 'Deposuit'



Lauda Jerusalem and the Magnificat a 7 lie consistently at a higher written pitch-level than the other Vespers movements, a fact which is reflected in (or caused by) the choice of a different set of clefs. These high clefs and what I shall call normal clefs are shown in ex.2. (The anachronistic terms *chiavette* and *chiavi naturali* need not be used.)<sup>4</sup> There are variants of both

Ex.2 High and normal clef configurations



sets of clefs, but the configuration in use may generally be identified quite easily from the clef of the lowest part: normal clefs have the bass clef (F4), while high clefs have baritone, tenor or even alto clef (F3 (=C5), C4 or C3). The presence or absence of a key signature with a particular clef or set of clefs can affect the implications for transposition and will be indicated in subsequent examples by ( $\flat$ ) or (–) after each clef.

In his 1610 publication Monteverdi uses high clefs not only for these two movements but also for the alternative Magnificat a 6, and for the whole of the sixpart Mass In illo tempore which takes pride of place in the collection.<sup>5</sup> Again we must ask whether the clefs simply reflect the composer's decision to write in a higher tessitura than elsewhere (perhaps in response to the texts) or whether the use of such clefs is the result of certain theoretical conventions which, though of little consequence to the singer, acted as a clearly understood signal to the instrumentalist to transpose. Although an understanding of these general questions is fundamental to the performance of Renaissance polyphony, there has been very little serious research of practical value since the late 1940s, when Arthur Mendel published his findings.<sup>6</sup> Performers for the most part have been seemingly oblivious to the problems and editors have perpetuated this state of affairs by failing to produce transposed editions of high-clef works, perhaps because of a horror of offending certain 'scholarly' principles.

In this article I shall try to show that 'obligatory transposition' is implicit in the notation of much vocal music of the late 16th and early 17th centuries and that some of Monteverdi's music (notably *Lauda Jerusalem* and the Magnificat *a* 7) requires it. I shall suggest that downward transposition of a 4th brings those Vespers movements into line with what is known both of

contemporary vocal types and of instrumental technique, and I shall therefore need to demonstrate that instrumentalists were equipped to transpose. Finally, I shall speculate briefly on Monteverdi's reasons for choosing to notate certain pieces at what is, to us, the 'wrong' pitch. But before looking in any detail at Monteverdi's works, the considerable evidence for conventions of transposition during the period of the composer's lifetime (1567–1643) must be examined. I shall concentrate on Italian and German sources; the latter (in particular the writings of Praetorius) are often concerned with Italian practices and are therefore an invaluable supplement. These sources fall broadly into three categories: theoretical writings, keyboard instruments and musical sources.

#### **Theoretical writings**

In his *Dimostrationi harmoniche* (1571) the Venetian composer and theorist Zarlino considers the possible written transposition of each of his 12 modes either up or down an octave, or up a 4th or down a 5th; that is, to just one alternative level, if we exclude octave transpositions. Almost in parenthesis he comments: 'Noi altri Organisti lo sapiamo, quanto sia di utile queste trasportationi: & come si possino fare' (We organists know how useful these transpositions are, and how they can be made).<sup>7</sup> For a player fluent in all the clefs, transposition down a 5th is a simple matter of substituting one clef for another and of adjusting the signature;<sup>8</sup> an organist playing from a high-clef bass line written in C4 would, for example, imagine an F4 clef in its place (ex.3).

Ex.3

# $= c^{1} \text{ or } f$

The organist's concept of transposition as the alteration of written pitches by a particular interval was not shared by the singer of the 16th and 17th centuries, for whom written notes represented not fixed pitches but a series of intervallic relationships. The position of the clef and the presence or absence of a flat dictated where the semitones occurred among the tones and hence the appropriate solmization. Cerone (1613) gives a table of those clefs that are equivalent in terms of solmization (ex.4) and comments:

Concluyremos pues que algunas Claves, puntualmente se parecen, en todo lo que toca al leer, y al hazer de las Mutanças; mas diffieren solamente en las letras y posiciones; la qual differença (como dixe) no es de consideracion à cerca del Cantante; el qual no considera

# otra cosa mas, que entonar sus vozes rectamente, con la observacion de los intervalos de Tono y Semitono.

We may conclude, then, that some clefs [with their signatures] look exactly alike in everything that concerns reading and the placing of the mutations; they differ solely in the letters and positions [i.e. pitch-names]; this difference (as I said) is of no concern to the singer, who is concerned only to sound his notes correctly, observing the intervals of tones and semitones.<sup>9</sup>

Ex.4	Cerone,	El	melopeo	y	maestro	(Naples,	1613),	p.494
------	---------	----	---------	---	---------	----------	--------	-------



Thus, if an organist chooses to accompany voices at a pitch other than the written one, he is involved in a transposition, but the singers are not. (For convenience, the term 'transposition' is used in this article for vocal and instrumental music alike, but this distinction in procedure should always be understood.) This should not beguile us into thinking of the singer as someone unconcerned with pitch-level: as we shall see, several theorists are quite explicit in saying that the organist's transpositions are made precisely to suit the voices.

The surprisingly wide range of intervals of transposition cultivated by organists in particular may misleadingly give the impression of complete flexibility. It is important, rather, to think of these transpositions as being in two separate categories which sometimes overlap: first, the larger intervals of transposition (of a 4th or 5th) necessary to reconcile most high-clef music with normal vocal ranges; second, those fine adjustments (of a tone) that take into account the tessitura of a particular work or the pitch of a particular organour main interest here is with the first category. Transposition of a minor 3rd may have been considered a combination of the two categories: a primary transposition of a 4th, modified by a tone (and in some contexts transposition of a 4th consists of a primary transposition of a 5th adjusted by a tone).

This division seems to be acknowledged by Diruta (1609), who devotes a chapter of his keyboard treatise, *Il transilvano*, to 'la vera formatione, cognitione, e transportatione di tutti i Tuoni, sì del Canto figurato, come anco del Canto fermo: Cosa appartenente ad ogni Organista per lasciare in Tuono al Choro' (the true formation, recognition and transposition of all the Tones, whether of polyphony or of chant: a matter concerning every organist when he is giving the pitch to the choir).<sup>10</sup> After illustrating the Tones and their transpositions a 4th higher or 5th lower, he writes:

vi è necessario intendere un'altra sorte di trasportationi per poter rispondere al Choro in voce commoda, tanto nel Canto figurato, quanto nel Canto fermo. E perche la maggior parte de gl'Organi sono alti, fuora del Tuono Choristo, bisogna che l'Organista si accommodi à sonare fuor di strada, un Tuono, & una Terza bassa. it is necessary to understand another sort of transposition in order to be able to respond to the choir at a convenient pitchlevel, whether in polyphony or in chant. And because the majority of organs are high and not at choir pitch, the organist needs to become accustomed to playing outside [the usual keys], a tone and a 3rd lower.<sup>11</sup>

Diruta then gives short, two-voice musical examples in the 12 modes, each with one, two or three transpositions 'per commodità del Choro': except in the case of Tone 2, all the transpositions are downwards and, predictably, transposition down a 2nd or a (minor) 3rd is common. In Tones 5, 7, 9 and 12, where G2 clefs are used for the upper parts, the intervals of transposition are wider (down a 4th, 5th and, once, a minor 7th).<sup>12</sup>

Such transpositions were by no means new.<sup>13</sup> Galilei (1581) mentions in passing that 'i periti Organisti' (skilled organists) are accustomed to transpose 'per comodità del coro per un Tuono, o per una Terza, o per altro intervallo' (for the convenience of the chorus, by a tone, a 3rd or some other interval).<sup>14</sup> But the full range of transpositions was not possible on instruments tuned in mean-tone temperaments. Cima (1606) recognized and attempted to solve the problem by giving directions for the wholesale retuning of accidentals for each semitonal transposition. (Although he is addressing organists, his rules are for the tuning of 'un Clavicordo'.)

Conoscendo io di quanta importanza sia à gli Organisti, per commodità de Cantori ne i concerti loro, il saper sonare in qual si voglia luogo, & intervallo del nostro Instrumento; m'è parso lodevol cosa dare in luce il modo; con che si possa agevolmente far questa prattica... Et che questa pratica sia necessaria, lo mostra chiaro il famoso Zerlino [sic] nel quarto libro delle sue Institutioni armoniche al capitolo 17.

Recognizing as I do how important it is for organists to know how to play at any pitch-level and interval on our instrument for the convenience of singers in their *concerti*, it seemed to me laudable to make known a means by which one may easily put this into practice... That this practice is necessary is shown clearly in book 4, chapter 17 of the famous Zarlino's *Istitutioni harmoniche*.<sup>15</sup>

Even if Cima's recommended procedure is impracticable for organs—and no other musician or theorist of the Baroque is known to have described it—he does unequivocally expect organists to be able to play in the remoter keys.

Each untransposed Tone and its prescribed transposition admitted of a few specific accidentals only. In the *Intonationi d'organo* (1593) by Andrea and Giovanni Gabrieli, <sup>16</sup> there are therefore just six different accidentals altogether: B natural, the flats on B and E and the sharps on F, C and G. Certain transpositions, though, inevitably introduced further, unfamiliar accidentals such as A flat and D sharp. The occasional written appearance of these new keys in vocal polyphony had already drawn adverse comment from Zarlino (1558)<sup>17</sup> and Galilei (1581),<sup>18</sup> though Rodio (1609)<sup>19</sup> explains how singers can simplify the solmization process by substituting high for normal clefs and vice versa. Cerone (1613) summarizes the position as follows:

Los quales [accidentales extraordinarios], aunque son mas usados de los Organistas para accomodarse mejor con el Choro, que de los Compositores para componer sus obras, por la difficultad que tienen los Cantores de ver tantos Be moles, y tantos Be quadrados ò Sostenidos, y de cantar fuera de las cuerdas ordinarias; ... todas las [Sequencias] que apuntadas estan con esta b señal en una sola posicion de befabemi, ò con su Octava, son las accidentales mas usadas de los Compositores. Digo mas usadas de los Compositores, porquanto de los eccelentes Organistas todas indifferentemente son praticadas y usadas: es asaver, quando uno y quando otro, y esto segun el Tono alto ò baxo del Organo, usando siempre de aquel que sale mas comodo para el Choro.

These [extraordinary accidentals], though, are used more by organists to suit the choir better than by composers in composing their works, because of the difficulty singers have when they see so many flats and so many naturals or sharps and have to sing on unfamiliar staff-degrees; . . . all the [species] that are notated with a single B flat, or with its octave, are the accidental ones most used by composers. I say most used by composers, because all [the above transpositions] are practised and used equally easily by excellent organists: that is, now one and now another according to the high or low pitch of the organ, always using the one that best suits the choir.<sup>20</sup>

Clearly there was resistance to the use of complicated keys in vocal notation. In Agazzari's essay on continuo playing (1607) we may also detect a reaction against the remoter unwritten transpositions sometimes practised:

Finalmente conviene saper anco trasportare le Cantilene da un tasto ad un'altro, quando però vi sono tutte le consonanze naturali, e proprie di quel tono; perche altrimenti non si debbon trasportare, perche fa brutissimo sentire, come io alle volte ho osservato, che trasportando un primo, over secondo tono, che sono di natura soave, per le molte corde di B. molle, in qualche tasto, ch'l suo tuono sia di B. quadro, difficilmente potrà, chi suona, esser tanto cauto, che non inciampi in qualche contraria voce; e così vien à guastarsi il conserto, et offender l'udito de gl'ascoltanti con tal crudezza; anzi mai mostra la naturalezza di quel tuono. Trasportar alla quarta, ò quinta, è più naturale, e commodo di tutti: e tal volta una voce più giù, ò più sù; ed in somma convien veder quel più proprio e conferente à quel tuono: e non come fanno alcuni, che pretendono suonar ogni tuono in ogni corda; perche s'io potessi disputar alla lunga, gli mostrarei l'impropietà, ed error loro.

Finally, one must know how to transpose pieces from one degree to another so that all the consonances are correct, and proper to the given Tone. Otherwise one must not transpose, because, as I have sometimes observed, it makes a very disagreeable sound [, for example,] to transpose a first or second Tone, naturally pleasing because of its many B flats, to some degree whose Tone requires B natural; it will be difficult [even] for the careful player to avoid stumbling against some conflicting note. And thus, the ensemble is spoiled and the listeners are offended with such crudity, while the natural character of the given Tone never appears. Most natural and convenient of all is transposition by a 4th or 5th, and sometimes a note higher or lower; in short, one must see which is most appropriate and suitable to the given Tone, not as some do who pretend to play every Tone at every level, for if I could argue at length, I would show them their impropriety and error.<sup>21</sup>

We should note here the emphasis given to the 'basic' intervals of transposition: a 4th, 5th and tone.

If none of these Italian theorists unequivocally associates downward transposition and high-clef music, there may be good reason. First, as I have shown, the concept of transposition did not exist for the singer, and thus the theoretical writing on singing does not touch on the subject. Second, organists themselves may perhaps have scarcely regarded such manoeuvres as transposition-they, too, thought largely in terms of solmization syllables-and in any case were so thoroughly schooled in the art of transposition for the purpose of accommodating vocal ranges that the need would have been obvious. None of the Italian theorists concern themselves with explaining exactly when transpositions are necessary; they merely assert that they are indeed necessary and advise how to make them.

It is Praetorius (1619) who, in characteristically thorough and practical fashion, clarifies the matter:

Ob zwar ein jeder Gesang, welcher hoch Claviret, das ist, da im Bass das 🖹 uff der ander oder dritten Lini von oben an zu zehlen, oder das 🤊 uff der dritten Lini also 🖬 befunden wird: Wenn er b mol, per quartam inferiorem in durum; Wenn er aber + dur, per quintam inferiorem in mollem, naturaliter in die Tabulatur oder Partitur von Organisten, Lauttenisten und allen andern, die sich der Fundament Instrumenten gebrauchen, gebracht unnd transponiret werden muss: So befindet sich doch, dass in etlichen Modis, Als in Mixolydio, Aeolio und Hypojonico, wenn sie per

quintam transponiret, eine languidior & pigrior harmonia propter graviores sonos generiret werde: Darumb es dann ungleich besser, und wird auch der Gesang viel frischer und anmuthiger zuhören, wenn diese Modi per quartam ex duro in durum transponiret werden.

Every vocal piece in high clefs, i.e., where the bass is written in C4 or C3, or F3, must be transposed when it is put into tablature or score for players of the organ, lute and all other foundation instruments, as follows: if it has a flat, down a 4th *in durum*, but if it has no flat, down a 5th *in mollem*, *naturaliter*. Yet if some modes, e.g. Mixolydian, Aeolian and Hypoionian, are transposed by a 5th, a duller and worse harmony is produced because of the lower sounds; hence it is much better, and the piece becomes much fresher and more spirited to listen to, if these modes are transposed by a 4th, *ex duro in durum*.<sup>22</sup>

Later, in a section on organ continuo, these principles are taken almost for granted:

Dieses aber muss sonderlich allhier observiret und in acht genommen werden, dass in denen Gesängen, welche Mixolydij, AEolij und Hypojonici Modi, in quartam inferiorem (weil es in der Quint wie oben angezeigt, allzuschläfferig seyn möchte, und in der Quart sich etwas frischer und anmutiger, sonderlich uffn Instrumenten hören lest) transponiret werden, forn an bey dem Clave Signata 9 die Diesis \* bezeichnet.

But this especially must be observed and taken note of here: that in those songs which, [being] in Mixolydian, Aeolian and Hypoionian modes, are to be transposed a 4th lower (because down a 5th, as shown above, may be too sleepy, and down a 4th sounds rather fresher and more pleasant, especially on harpsichords) a sharp is marked at the beginning beside the clef.<sup>23</sup>

(We should note in passing the special importance of transposition down a 4th.)

If Praetorius seems rather dogmatic, we must at least acknowledge that none of the Italian theorists contradicts him in any way.<sup>24</sup> A decade or so later, another German theorist, Wolfgang Schonsleder (1631), gives a complete set of high clefs (G2 C2 C3 F3) and declares that he is 'amazed to see the majority of musicians customarily writing many of their songs in them, although they know that if anyone wishes to sing them they will have to be transposed downwards'.<sup>25</sup>

With the development of instrumental music, free of vocal models, the concept of fixed pitches began to predominate; hence in due course the problem of understanding the different notated pitch-levels of earlier periods. But a tradition of performing this earlier repertory would appear to have continued through the 17th century, and, with it, the necessary skills of transposition. Penna's *Li primi albori musicali* 

(1672)<sup>26</sup> emphasizes the importance of downward transposition of a 4th and 5th in association with highclef bass parts but also gives various transpositions for normal-clef bass parts. Similarly, Bismantova's Compendio musicale (1677-9) gives instructions as part of the 'Regole; p[er] suonare il Basso Continuo',<sup>27</sup> for transposing down a 4th and a 5th (although without reference to high clefs) and proceeds to describe other transpositions. Later, Samber (1707)<sup>28</sup> specifically associates the high-clef notation of 'old Introits, Graduals and Counterpoint-Masses' with downward transposition (when the lowest clef is F3, by a 4th; when C4, by a 5th). And much later still, Paolucci (1772)<sup>29</sup> gives examples from Palestrina, Benevoli and Colonna of high-clef music and calls for transposition down a 4th or 5th.

## **Keyboard instruments**

From the theoretical material we move to the second category of evidence, which though small is significant: the nature of certain 16th- and early 17th-century keyboard instruments. (For this section a brief departure from the self-imposed restrictions to Italian and German practices seems justified.)

The notion that downward transposition, in particular that of a 4th, is regularly required in the performance of late Renaissance and early Baroque music receives strong support from the disposition of the contemporary Flemish two-manual harpsichord. With a slightly patronizing air, Quirinus van Blankenburg (1739) looks back to the early 17th century:

In die tyd was men in de Transpositie zo onërvaren dat men om eenig spel een quart lager te konnen transponeren expres een byzonder tweede clavier in de clavicimbel maakte. Het schynt ongelooflyk, maar't bewys't welk zeer aanmerkensweerdig is, zal't zelve bewaar heiden, dat de vermaarde Ruckerssen van 't begin der voorlede eew af tot meer als 30 jaren daar na niet anders hebben gemaakt.

At that time, they were so inexperienced in transposition that in order to be able to transpose a piece a 4th downwards they made a special second keyboard in the harpsichord for the purpose. This seems incredible, but the proof, which is very remarkable, will show that the famous Ruckers family from the beginning of the last century for more than 30 years made nothing else.<sup>30</sup>

On a normal double-manual Ruckers harpsichord the shorter upper keyboard stood at 'standard' pitch and the lower one a 4th lower, with the upper c' key aligned with the lower f' and sounding the same strings. (Some earlier organs may well have had a similar disposition.)<sup>31</sup> Only one such harpsichord survives in its original



2 Two-manual harpsichord by Joannes Ruckers, 1638 (Russell Collection, University of Edinburgh)

state, the 1638 Joannes Ruckers in the Russell Collection, Edinburgh University<sup>32</sup> (illus.2), but more than a dozen others by members of the Ruckers family from before 1642, plus a 1646 Joannes Couchet, show signs of having originally been transposing instruments. Furthermore, although double-manual instruments without this feature can be shown to have been in existence by 1620, the earliest surviving example, by Hans Moermans the Younger, dates only from 1642.<sup>33</sup> So though Blankenburg may not necessarily be right in regarding the principal function of these instruments to be transposition,<sup>34</sup> their nature clearly facilitates it.

Other fragments of organological information also hint at the co-existence of two pitch standards a 4th or so apart from each other. Although much of the history of the Italian harpsichord is still rather obscure, it has been plausibly suggested that surviving instruments were built at pitches a 4th or 5th apart;<sup>35</sup> unfortunately the issue is complicated by the fact that strings of brass and steel imply different optimum pitch-levels.<sup>36</sup> Clearly there was great diversity of pitch standard; but, equally clearly, there was broad understanding of how these pitches were related. Banchieri (1608), for example, in tuning an organ or 'strumento da penna' (quilled keyboard instrument), recommends starting with an F, 'quella si pone in tuono della natura dell'instromento in voce corista overo un tuon più basso overo 4. superiore, o inferiore' (which you set at the natural pitch of the instrument, [whether] at choir pitch or a tone lower or a 4th higher or lower).<sup>37</sup> Similarly, Praetorius describes the *spinetta* as being an octave or 5th above 'normal' pitch<sup>38</sup> and labels his woodcut of a harpsichord 'Clavicymbel, so eine Quart tieffer als Chor-Ton' (Harpsichord, a 4th lower than choir pitch).<sup>39</sup>

There were also some single-manual keyboard instruments that could be set at different pitch-levels. A Venetian harpsichord now in Cambridge, probably 16th-century, seems to have had a third set of strings of a different scale from the others and possibly tuned a tone higher,<sup>40</sup> while a 17th-century regal in the Heyer Collection had a keyboard that could be shifted by a tone.<sup>41</sup> The principle of the sliding keyboard was evidently known in Germany as early as 1537,<sup>42</sup> and Carl Luython's *clavicymbalum universale*, which Praetorius describes,<sup>43</sup> had a keyboard (with 19 keys to the

octave) that could be set in any of seven positions, covering a major 3rd. A little later G. B. Doni (1635)<sup>44</sup> mentions a harpsichord by a Florentine maker, Iacopo Ramerino, 'nel quale ingegnosamente con muover solo la chiave del Registro, l'istesse corde serviranno al tuono di Roma, a quel di Firenze, & a quel di Lombardia' (in which, ingeniously, just by moving the register the same strings will give you the pitch of Rome, that of Florence and that of Lombardy).

### Discrepancies in musical sources

Having discussed theorists and instruments, we now turn to the third category of evidence: the musical sources. Numerous instances could be cited of works (masses and other cyclic compositions) with some movements in high and some in low clefs, producing implausibly wide vocal ranges (e.g. Palestrina's fourpart *Missa de beata Virgine* (1567),<sup>45</sup> Le Jeune's threesection 'Aeolian' piece from his *Dodécacorde* (1598)<sup>46</sup> and Landi's *Il Sant'Alessio* (1634).<sup>47</sup> These certainly suggest the need for transposition but do not provide conclusive proof of it, so I shall confine this discussion to examples that offer more explicit evidence.

Occasional discrepancies between keyboard intabulations and their vocal counterparts suggest a pattern of transposition consistent with Praetorius's rules. For example, a version in organ tablature of the Kyrie and Gloria from Jacob Handl's Missa 'Adesto dolori meo' lies a 4th lower than the original, which uses the clefs G2 G2 C2 C3 F3 (b).48 Printed anthologies of intabulations confirm that such transpositions are not made simply to accommodate the pitch of a particular instrument. The first section of Bernhart Schmid's 1577 collection<sup>49</sup> contains 20 works: 19 motets and a chanson. Of the eight originally notated in high clefs, four remain untransposed, two are put down a 5th and two down a 4th. (The two down a 5th have no signature in the original; of the two down a 4th, one has a flat, the other does not.) There are no obvious reasons for this inconsistency of approach to high-clef music. Jacob Paix's volume of six years later<sup>50</sup> is rather more revealing. Of 24 motets, seven in normal clefs are untransposed, while 16 in high clefs are transposed down a 4th or a 5th. (Of these, all 12 with a flat signature are down a 4th, whereas the four without are transposed down a 5th.) Only one piece with high clefs is left untransposed.

It could be argued that all these intabulations are independent of their models and that any adjustments of pitch are merely examples of editorial taste. Against this must be set the very considerable number of differences of pitch-level that occur not between different sources but within a single piece.

Publications for lute and voices are invaluable in this respect; a vocal part may be notated in one key, while the tablature of its accompaniment implies another. (Adriaenssen's Pratum musicum (1584) gives intabulations of high-clef works generally down a 4th but sometimes down a 5th.)<sup>51</sup> The Roman publisher Simone Verovio issued several collections which offer examples of both lute and keyboard versions alongside their vocal originals. The first of these, Diletto spirituale (1586) contains 21 three- and four-voice devotional pieces, each printed in parts on a left-hand page, and opposite them, versions for keyboard and for lute in G (illus.3).<sup>52</sup> There is a clear pattern of transposition, identifiable in this case from the clef of the top part and the signature: when the clef is C1, there is no transposition, when it is G2(-), transposition is down a 5th, and when G2(b), down a 4th. (The single exception may be an error: Nanino's Jesus in pace imperat, which has a G2 clef, has a transposed lute intabulation but an untransposed keyboard version.) The secular music of Verovio's similar Lodi della musica (1595) follows exactly the same system; of the 18 items 9 are transposed.<sup>53</sup> The six madrigals 'per cantar nel Chittarrone' in Salamone Rossi's first published collection<sup>54</sup> also follow this pattern. The tablature for chitarrone (in A) matches the pitch of the four that use C1 and F4 clefs, whereas the two that use G2 and F3 clefs (b)appear a 4th lower in the tablature.

Although most organists would have been fluent in at least a few transpositions, written-out transpositions in staff notation are not uncommon. Among the solo items of the *Cento concerti ecclesiastici* (1602) of Lodovico Viadana<sup>55</sup> are six which, exceptionally, have the voice part in a high clef (G2 for soprano, C2 for alto, and C3 for tenor, all (b)), written a 4th higher than the organ part. There are comparable examples elsewhere in the collection, among the works for several voices. Similarly, two isolated items in G. F. Anerio's *Antiphonae, seu sacrae cantiones* (1613) have organ continuo parts a 4th below the voice parts,<sup>56</sup> and in the set of Magnificats published by Johann Stadlmayr the following year, there is one in high clefs with its two organ parts notated a 4th lower.<sup>57</sup>

We now come to the music of Heinrich Schütz, who studied in Venice with Giovanni Gabrieli and later perhaps also with Monteverdi himself, and whose substantial output is particularly valuable in establishing principles of transposition. His setting of

uncai catab

3 From Diletto spirituale, published by Simone Verovio, Rome (1586); for voices (left), keyboard (top right), and lute (bottom right)

Psalm 111, *Ich danke dem Herm*, <sup>58</sup> is in fact a reworking of Giovanni Gabrieli's double-choir madrigal 'per cantar et sonar', *Lieto godea a* 8;<sup>59</sup> in the original each choir has the high-clef configuration G2 C2 C3 F3(–), while in Schütz's version the clefs are C1 C3 C4 C5( $\flat$ ) and the music is a 5th lower. More revealing still is the notation of Schütz's *Musicalische Exequien* (1636), where the voices are in high clefs (in A minor), but the continuo part is printed a 4th lower (in E minor).<sup>60</sup> Schütz himself explains:

Den Bassum Continuum habe ich den Sängern zum Vorteil, und zu berürung deren auff der Orgel zu diesen Wercke mir gefälligen chorden eine Quarta niedriger transponiret, ohngeachtet mir nicht ohnwissend, dass ad Quintam inferius, es auff der Orgel natürlicher kommen, damit auch vielleicht den ohngeübten Organisten eines theils besser gedienet gewesen were.

For the benefit of the singers and in order to have the chords I prefer in this work played on the organ, I have transposed the basso continuo down a 4th, although I am well aware that it would go more naturally on the organ a 5th lower, thereby perhaps making things easier for the inexperienced organist.

explaining the transposition as a step taken 'for the benefit of the singers'. But the point at issue is that he is taking for granted downward transposition by a 5th for a work in high clefs (without signature); he thinks, however, that in this case the pitch then becomes too low for his singers and so he transposes down by a 4th instead, thus making things more difficult for 'the inexperienced organist', who now has to read a part with the still unusual signature of one sharp.<sup>61</sup> We find the same transposition down a 4th (from A minor to E minor) in the seventh of the Zwölf geistliche Gesänge (1657),<sup>62</sup> where the vocal parts are notated in high clefs (without signature) and the organ part has one sharp. It is perhaps a little surprising that in the second half of the 17th century Schütz should still expect singers to be aware of the transposing convention and to prefer to avoid a sharp signature.<sup>63</sup> But there is one important additional feature: the work is explicitly headed 'ad Quartem inferiorem' (a 4th lower).

#### Instructions in musical sources

At first glance, it may seem that Schütz is simply

We have seen examples of discrepancies between two

independent sources (suggesting a convention of transposing) and of discrepancies within a single source (revealing the clear necessity of transposing). In a last glance at the evidence of contemporary musical sources, we turn to those which contain explicit instructions or advice on the subject.

The earliest example would appear to be from the first publication of sacred music to include a basso continuo, Viadana's collection of 1602, already cited.<sup>64</sup> There the third and fourth items, *Fratres, ego enim accepi* and its second part *Accipite et manducate*, are intended for 'Canto solo over cornetto', while the organ part (written a 4th lower) bears the rubric 'Sonando questo Concerto co'l Cornetto l'Organista sonarà la quarta alto così' (When playing this concerto with cornett, the organist will play a 4th higher, thus); there follow the first few notes a 4th higher. In other words, the piece may be performed either vocally (at the lower pitch) or instrumentally (at the higher pitch).

Caspar Vincentius evidently preferred to leave certain options of transposition open to the organist. In a preface to the *bassus generalis* part prepared by him for part 2 of Abraham Schadaeus's anthology *Promptuarium musicum* (1611) he writes:

nullà usus sum harmoniarum transpositione: sed in descriptione singulas in suis, ut in exemplari extant, reliqui Clavibus. Quilibet igitur pro suo lubitu, praesertim hac Clavi signatas cantiones, vel per Quartam vel per Quintam transponat. Praeterea quia in his regionibus organorum atque instrumentorum Calculi sive Claves ita conficiuntur, ne in a duro tertiam majorem habeamus Organista facilè sibi imaginabitur si clavem, esse se Ahabebit Quintam inferiorem.

I have not used any transposition of the pieces, but in the notation I have left them all in their clefs, as they stand in the originals. So, anyone may transpose as he pleases by either a 4th or a 5th, especially those *cantiones* given with the C4 clef (without signature). Furthermore, because the *calculi* or keys of organs and harpsichords in these areas are so designed that we do not have the major 3rd *in*  $\models$  *duro* [i.e. above B $\models$ ], the organist will easily imagine the clef C4 (-) to be F4( $\flat$ ) and will have the lower 5th.

Casually read, this may appear to suggest that transposition is at the player's discretion; but it is only the choice of interval (a 4th or 5th) that is in fact free. Vincentius sees no point in notating a transposition of a 5th when this can easily be achieved by a simple clefsubstitution and prefers to avoid those transpositions of a 4th which introduce the tuning problems of sharp keys.<sup>66</sup>

the player, and we have already noted two examples in his Antiphonae, seu sacrae cantiones where a transposition is written out. The collection is an exceptionally large one and therefore of exceptional value in assessing any systematic approach.<sup>67</sup> Of the 244 works, 37 use high clefs; these are all marked 'Alla quarta' or 'Alla 4' in the bassus ad organum partbook and no other interval of transposition occurs. A further 14 items have the rubric 'sonate come stà' (play it as it stands); these are works, without vocal bass and with the continuo part in a C4 clef, which might otherwise appear to be high-clef pieces needing transposition. The importance of three features of Anerio's collection cannot be over emphasized. First, the complete consistency of clef and transposition: all high-clef pieces are to be transposed, and none of those in normal clefs. Second, the exclusive importance of transposition by a 4th, whichever clef is used for the continuo part (C3, C4 or F3); Verovio's and others' distinction between pieces without signature (down a 5th) and those with one flat (down a 4th) is not observed here. Third, the implication contained in the phrase 'sonate come stà' that a bass part in a C4 clef would automatically suggest transposition to a keyboard player.

A slightly more complicated but consistent picture emerges from a study of Polyhymnia caduceatrix et panegyrica (1619), Michael Praetorius's large collection of polychoral music<sup>68</sup> issued in the same year as the last volume of his Syntagma musicum. There are eight works notated in high clefs, all without signature, and against all but one of these in the bassus generalis is the instruction 'quartam vel quintam inferiorem' (a 4th or 5th lower). In notes preceding nos.15 and 16, Aus tiefer Not and Nun freut euch,<sup>69</sup> the composer reiterates the point made in his treatise<sup>70</sup> that here transposition down a 4th or 5th must be made, the former being better for the voices. The exception, no.6, Allein Gott in der Höh sei Ehr, the Lutheran versification of the Gloria, is simply marked 'per quartam inferiorem', and in a separate note preceding no.5, Teutsche Missa: O Vater allmächtiger Gott, we may discover why transposition down a 5th is here ruled out:

In den Kirchen, do das Gloria vor dem Altar gesungen wird, muss man das (Preis sei Gott) aussen lassen, und sobald das Allein Gott in der Höh sei Ehr, à 6 & 12 anfangen, Aber es muss um eine Quart tiefer musicirt werden, damit es in den rechten Ton mit dem vorhergehenden Kyrie, O Gott Vater, Christe, etc. überein komme.

In contrast, G. F. Anerio seems to leave no choices to

In churches where the Gloria is sung in front of the altar, one



4 Musicians in a gallery: brown wash and ink drawing by Domenico Canuti (1620–1684) (Pierpont Morgan Library, New York)

must omit the *Preis sei Gott* and immediately begin the *Allein Gott in der Höh sei Ehr a* 6 and 12; but it must be performed a 4th lower, so that it agrees in pitch [or key] with the preceding *Kyrie, O Gott Vater, Christe*, etc.

In other words, if the Kyrie (which is in normal clefs) and Gloria (in high clefs) were to match in key, avoiding a downward shift of a tone, the interval of transposition was necessarily a 4th, not a 5th.

Comparable instructions, though without elaboration, are found in Schütz's Kleine geistliche Concerte, i (1636). Here, the only three pieces written in high clefs, all without signature, are to be transposed down a 4th or 5th, according to instructions given in the continuo part (e.g. 'Organum ad quartam inferius').71 For whatever reasons, there may have been an increasing desire or need for composers and publishers of the 17th century to be more explicit about the intended pitchlevels of their music. The substantially revised 1661 reprint of Schütz's Psalmen Davids op.5 (the Becker Psalter),<sup>72</sup> originally published at Freiburg in 1628, strongly hints at such a change of approach, and several errors suggest a last-minute change of policy concerning the method of presenting the various transpositions.<sup>73</sup> With 30 psalms in high clefs and over 100 transposition instructions, these 158 pieces probably represent the richest surviving source of information on this subject.<sup>74</sup>

In the publication as a whole, which contains several new items, transposition down a 4th is indicated 35 times, with transposition down a 5th (as a second option) 17 times; each is almost always associated with high-clef notation. Appropriately, transposition down a 3rd (which occurs 17 times, eight of them with high clefs) is mostly a second option and is often marked 'pro exercitatis' (for the experienced).75 Adjustments of a tone are also frequent; upwards 12 times and downwards 29 times. (It could be argued that the quite high incidence of transposition down a tone is related to the rather high pitch of German organs; Praetorius also suggests this transposition for music of a wide range where the cantus is high.)<sup>76</sup> The purpose of these various transpositions is explained by Schütz in a note at the end of the bassus continuus part:

solche Transpositionen bey Gebrauch dieses Werckleins (bevorab in denen hoch = gezeichneten Systematis) offtermals nicht alleine hochnötig, sondern auch der Cantorum Stimmen bequem, und dem Gehör desto angenehm fallen.

In using this little work such transpositions (especially in those with high clefs) are often not only very necessary but also comfortable for the singers' voices and fall all the more pleasantly on the ear.

All this may appear to indicate a new level of sophistication; but 80 years earlier Galilei (and before him Bermudo) had expected 'skilled organists' to be familiar with these various intervals of transposition. What is new is that the composer's own precise wishes are made explicit. (This in itself may perhaps suggest a greater degree of pitch standardization than in the earlier period.) Superficially, it may be taken to undermine the simple principle that high-clef music be transposed to the 'normal' level. In fact, by allowing subtle adjustments to individual pieces (while retaining a relatively simple notation), it reinforces the idea of small, well-defined ranges for each category of voice and thereby the absolute necessity of reconciling high- and normal-clef music. The two categories of transposition described above have merely merged. In other words, where some composers would confine themselves to indicating 'obligatory' transposition of a 4th or 5th, leaving organists to make smaller adjustments of pitch to allow for vocal range and so on, here Schütz for normal-clef pieces suggests the smaller adjustments, while for high-clef pieces he gives only the 'resultant' transposition, for example, a 4th down (obligatory) and a tone up (adjustment), producing a downward transposition of a minor 3rd.

Before finally focusing our attention on the music of Monteverdi, it will be as well to look back briefly at the evidence so far presented. From Zarlino (1571) to Cerone (1613) the theorists merely tell us that organists should be capable of transpositions (often quite complex ones), while Praetorius (1619) explains exactly where transposition down a 4th or a 5th is necessary. The fact that almost all two-manual Flemish harpsichords before the mid-17th century incorporated two different pitches a 4th apart emphasizes the importance of transposition by a 4th. Keyboard and lute intabulations from before 1600 show transposition of high-clef pieces down a 4th and a 5th (and sometimes a tone), while organ continuo parts from Viadana (1602) to Schütz (1657) reveal written-out transposition down a 4th and instructions or recommendations for transposition down a 4th (notably in Anerio (1613)) and, to a lesser extent, a 5th. One of Schütz's last publications (1661) shows a greater variety of interval of transposition, but is wholly consistent with the idea of bringing high-clef writing down to the more normal written levels, a principle (or at least a practice) that was still familiar to Samber (1707) and even Paolucci (1765-72).

#### Monteverdi's 1610 Mass and Vespers: Voices

Monteverdi's 1610 publication contains four pieces notated in high clefs:

Table 1	S	Α	Т	В
Mass	G2 G2	C2	C3 C3	F3 (—)
Lauda Jerusalem	G2 G2	C2 C2	C3	F3 F3(–)
Magnificat a 7	G2 G2	C2	C3 C3	F3 F3(⊧)
Magnificat a 6	G2 G2	C2	C3 C3	F3 (ŀ)
			(&F3) <sup>77</sup>	

There are no instructions for transposition and the bassus generalis is consistently at the written pitchlevel of the other parts. Following Praetorius's clearcut rules, the continuo player should play the Mass and Lauda Jerusalem either a 5th or a 4th down, and the two Magnificats a 4th down. (In practice, smaller intervals of transposition, of a tone and a minor 3rd, are perhaps feasible for the Magnificat *a* 6 but would place the virtuoso obbligato instrumental writing of the related Magnificat a 7 in wholly unacceptable keys; for Lauda Jerusalem, and perhaps even for the Mass, transposition down a minor 3rd cannot be completely ruled out.) But does Monteverdi's music in general show any evidence of conforming to the conventions we have found documented and practised by Praetorius and others?

In the large posthumous collection of Monteverdi's church music (1650) is a setting of *Laudate pueri* 'a 5 voci da Capella'<sup>78</sup> notated in the clefs and signature of the two 1610 Magnificats (G2 C2 C3 C3 F3 ( $\flat$ )) and in the same key (G minor). Here the *basso continuo* part contains the unambiguous instruction 'Alla quarta Bassa'. Whether or not this was originally the composer's own marking, the suggested transposition was clearly considered reasonable by his editor (or at least by the user of the copy which the publisher had acquired). A comparison of the written vocal ranges of this psalm and of those of the Magnificat *a* 6 reveals a predictable similarity and an identical overall compass

Ex.5 Vocal ranges in Monteverdi, (a) Laudate pueri (1650) and (b) Magnificat a 6 (1610)



In this and subsequent examples, the notes in parentheses occur once only

(ex.5). Thus if the 1650 *Laudate pueri* is to be transposed down a 4th, should not the Magnificat a 6 follow its example?<sup>79</sup>

The 1610 Mass, as we have observed, is notated in such a way as to suggest downward transposition by either a 4th or a 5th. The ranges of the work would clearly seem to rule out the lower option because of the lower extremities of each voice (ex.6). They do,

Ex.6 Vocal ranges in Monteverdi, Mass In illo tempore (1610)



The ranges in square brackets are those of the extra parts which appear in the Crucifixus (alto) and final Agnus Dei (bass).

however, match those of the 1650 *Laudate pueri* sufficiently for a performance at the same pitch as that, i.e. down a 4th, to be plausible. This possibility receives very strong support from two musical sources. In his *Esemplare ossia saggio fondamentale pratico di contrappunto sopra un canto fermo* of 1775 the eminent musical historian G. B. Martini quotes the Agnus Dei *a* 6 of Monteverdi's 1610 Mass down a 4th,<sup>80</sup> and in Brescia there exists an organ score by Lorenzo Tonelli from the late 17th or early 18th century of the complete Mass, also a 4th lower.<sup>81</sup>

For *Lauda Jerusalem* we have no such corroborative evidence. Ex.7 compares its vocal ranges with those of other movements of the 1610 Vespers. To leave *Lauda* 

Ex.7 Vocal ranges in Monteverdi, Vespers (1610), (a) Lauda Jerusalem and (b) other movements



Magnificats. Conflations have been made, since Monteverdi sometimes has more than one alto and bass part and also more than two tenor parts; but such doubles tend to move in the same range.

Jerusalem at its written pitch is to expand ranges which are already wide for the period by a small but critical amount; all except the tenor and second bass would extend above their ranges elsewhere in the Vespers. But if the psalm is transposed down a 4th, all its ranges (apart from two unique low notes in the alto part) are contained within the extremities of those found elsewhere. Ex.8, which compares these transposed ranges with those of the Mass and of the 1650 Laudate

Ex.8 Vocal ranges, transposed down a 4th, in (a) Lauda Jerusalem (1610), (b) Mass In illo tempore (1610) and (c) Laudate pueri (1650)



*pueri*, shows a similarly telling consistency. Although here the evidence is suggestive rather than conclusive, surely *Lauda Jerusalem* is intended to be performed at the lower pitch.<sup>82</sup>

Despite the logic of these arguments, the reader may well find that the evidence presented withers into insignificance when weighed against the aural memory of the Vespers with all sections at their relative notated pitches. He may be tempted to protest that Monteverdi surely intended a new, high tessitura for his final psalm, and that to seek mere consistency in range may be to miss his point. No doubt these low ranges also prompt other questions. What happens to all the brilliance and brightness of Lauda Jerusalem at the low pitch? Was Monteverdi's pitch-standard perhaps much higher than our present a'=440? The twin subjects of voice-types and pitch-standards in early 17th-century Italian music each require at least as much attention as do the conventions of transposition, and this is clearly impractical in the present article; moreover, they should not be allowed to confuse the issue of transposition, which is essentially quite distinct. Consideration of the topic may become easier, however, if the different voices are not thought of in terms of the modern SATB choir. In particular, Monteverdi's altos at Mantua are more likely to have been of the usual Renaissance type (i.e. what we call high tenors) than the falsettists or castrati who superseded them, while the contemporary tenor corresponded in range if not in timbre to our baritone. Greater emphasis on naturalness of diction and less on sheer power of singing, combined with a general fondness for low sonorities, encouraged vocal ranges lower than those familiar to us from the music of later eras.

Nowhere is familiarity such a barrier to comprehension as in the case of the celebrated Magnificat a 7 with which most modern concert performances of the 1610 Vespers close. Its untransposed and transposed

Ex.9 Vocal ranges in Monteverdi, Magnificat a 7 (1610), (a) as notated and (b) transposed down a 4th



( )

voice ranges are given in ex.9. The lower set scarcely seems designed to create the brilliant climax that we may have come to expect of the work, but it does accord closely with the ranges of the two high-clef works by Monteverdi for which we have evidence of transposition: the 1650 Laudate pueri and the 1610 Mass. If the presence of a low A for tenor causes some surprise, one need look no further for precedent than to the solo tenor writing in Audi coelum from the same publication;<sup>83</sup> but such a note is rare in Monteverdi's liturgical output.<sup>84</sup> (In his 1614 collection Caccini goes much further: he includes 'due Arie Particolari per Tenore, che ricerchi le corde del Basso' (two special arias for tenor which explore the bass register), combining tenor and (low) bass ranges.<sup>85</sup>) The abandon with which Monteverdi appears to call for (low) Ds in the vocal bass may cause rather more surprise. But in addition to those arising from transposing the 1650 Laudate pueri and 1610 Mass, there are instances in five polyphonic works from the 1640 collection<sup>86</sup> and three from the 1650 collection.<sup>87</sup> More sensational still, with their low Cs and 16-note range up to d' are the solo motet Ab aeterno<sup>88</sup> and the role of Neptune in Il ritorno d'Ulisse.89 Pluto's comparable two-octave compass (Dd') in Il ballo delle ingrate, 90 a Mantuan work dating from 1608, exactly matches the 1610 Vespers bass range with transpositions. Clearly such solo writing is of a different kind from that of 'Et misericordia' and 'Sicut erat', where transposition results in low Ds, but even such low, sober counterpoint is not without its equivalents, as comparison with the Gloria a 7 (1640)<sup>91</sup> shows (ex.10).

How does transposition of the Magnificat *a* 7 affect the ranges of the publication as a whole? Ex.11 gives the written ranges of all the polyphonic music in the Vespers. With *Lauda Jerusalem*, the two Magnificats and the Mass transposed down a 4th, the results are those given in ex.12. The comparison perhaps proves little; in the transposed table the bass range is slightly narrower, the tenor range wider, while alto and

Ex.10 Monteverdi, (a) Magnificat a 7 (1610), 'Et misericordia', at 'timentibus eum', transposed down a 4th, and (b) Gloria a 7 (1640), at 'pax hominibus voluntatis', as notated



Ex.11 Complete vocal ranges in the Vespers and Mass In illo tempore (1610) as notated



\* Here and in ex.12 void notes indicate extremities found only in the (untransposed) 1610 Mass.

Ex.12 Complete vocal ranges as in ex.11, but with the Mass, Lauda Jerusalem, and Magnificats a 6 and a 7 transposed down a 4th



soprano are much the same. In fact, we may well be inclined to favour the untransposed ranges on account of their greater familiarity from more recent music. It will therefore be of value to compare these tables with a contemporary one, that given by Praetorius in *Syntagma musicum*, ii (ex.13). (It may be tempting to postulate a higher pitch-standard for Praetorius than

Ex.13 Praetorius, Syntagma musicum, ii, p.20



EARLY MUSIC NOVEMBER 1984 503

Ex.14 (a) Magnificat a 7 (1610), 'Quia fecit', transposed down a 4th, and (b) Gloria a 7 (1640), 'Qui sedes', as notated



for Monteverdi, yet Praetorius specifically equates his with that of Italy.)<sup>93</sup> In both transposed and untransposed forms, two of Monteverdi's voice ranges exceed those of Praetorius: his soprano goes lower and his tenor higher. Without transposition, the upper end of both alto and bass is significantly higher; with transposition, soprano and alto go lower and the tenor both higher and lower.

This is also inconclusive perhaps, but consistency of range is a matter not only of extremities but also of tessitura. Although more difficult to demonstrate on the page, the gains in consistency of the tessitura resulting from the transpositions are considerable. At the lower pitch the bass duet writing in the Magnificat *a* 7, for example, reveals its close ties with that of the later Gloria a 7 (ex.14). The character of the solo tenor writing is still more revealing: although the introduction to the doxology of the Magnificat a 7 loses a certain amount of its presumed 'brilliance' by downward transposition, it now has much more in common with Audi coelum, Duo seraphim and, significantly, with the two principal tenor roles in the same composer's Orfeo. (See ex.15a-d.) Orfeo was published in 1609, just one year before the Vespers. The opera had been performed





(c) Duo seraphim (1610), tenor I



(d) Orfeo, Act V (Tutte le opere, xi, p.148)













ri

(a) Magnificat a 7 (1610), 'Gloria', tenor I

Ex.15

first in February 1607 and it is very likely that music for the 1610 publication was assembled, if not all composed, over the following three years.<sup>94</sup> These two works represent the twin peaks of Monteverdi's Mantuan output, and from the moment of the opening respond's reworking of the toccata from *Orfeo*, the Vespers invites comparison with its secular predecessor. One may reasonably conjecture that Monteverdi had some of the same singers specifically in mind. Was, for example, the original Orfeo, the great Florentine singer Francesco Rasi,<sup>95</sup> also the inspiration for *Audi coelum*? (See ex.15*e*–*f*.) The conflated ranges of (*a*) *Nigra sum*, *Duo seraphim* and *Audi coelum* offer a further point of comparison with (*b*) the role of Orfeo (ex.16).

 $Ex.16\ Tenor\ ranges\ in$  (a) Nigra sum, Duo seraphim and Audi coelum (1610) and (b) Orfeo



Such comparisons may well tip the scales back in favour of the transposed version, especially as Praetorius explains that in Italy a low pitch-standard well below his own was often used:

Sintemahl etliche Itali an dem hohen singen, wie nicht unbillich, kein gefallen, vermeynen es habe keine art, könne auch der Text nicht recht wol vernommen werden, man krehete, schreiye und singe in der höhe gleich wie die Grasemägde.

Some Italians, not unreasonably, take no pleasure in high singing, believing that there is no art in it, and also that the text cannot be properly grasped; they crow, shout and sing high up just like dairymaids.<sup>96</sup>

#### Instruments and transposition

Before looking for similarities or inconsistencies in the instrumental writing of *Orfeo* and the Vespers, we obviously need to ask whether instrumentalists other than continuo players would ever have been expected to transpose. After all, keyboard or lute tablature incorporates an appropriate transposition, a twomanual Flemish harpsichord gives the player a choice of pitch-level, and an organist, reading from staff notation, is specially trained in transposition to suit voices, while a singer is simply unencumbered by the concept of a fixed pitch. But why should a violinist ever be required to play a 4th lower than the notes in front of him normally suggested?

The only other high-clef work with obbligato instru-

mental parts in Monteverdi's output is the madrigal A quest'olmo 'a sei voci, concertato',97 which has parts for two violins and two 'flauti o fifara' [sic]; the ranges, however, are restricted and work either at pitch or lower and so are of no assistance to us. One answer may be that the players were not in fact required to transpose at sight. Praetorius expects many organists to prepare for a performance by writing out a tablature for themselves from the parts (see above); might violinists also perhaps expect to copy out parts, at whatever pitch was appropriate, from the printed source? The 1610 Vespers partbooks may be regarded as a compact repository of the musical text, from which parts were to be prepared if and as necessary. Although these eight partbooks are so arranged that a performance from them (with one voice or instrument to a part) can just be managed, further copying is essential if any degree of spatial separation is required. (If, for example, in Ave maris stella the two four-part choirs are to be separated, the instrumental group(s) for the ritornello (a 5) will be divided between them.) So it would have been a perfectly natural process for the instrumentalists (or a copyist on their behalf) to write out extra parts where necessary.

An alternative procedure, which Monteverdi might have adopted, is to present vocal parts at one pitch and instrumental parts at another. Already amply illustrated in connection with basso continuo parts, this approach is followed in Schütz's Nun lob mein Seel den Herren:98 the two vocal choirs are notated in high clefs (in C), while the two instrumental choirs are a 4th lower (in G), a fact that offers the clearest possible demonstration of (vocal) transposition theory in practice. A similar procedure is followed in the Mass from the Venetian composer Giovanni Antonio Rigatti's Messe e salmi (1640):<sup>99</sup> while the two violin parts are notated in G2 clefs at a normal level (in D), all the voice parts and the remaining instrumental parts (continuo and three 'viola'/trombone parts) stand a 4th higher (in G) in high clefs (G2 C2 C3 F3), all without signature.

These examples may seem to argue against the idea of instrumentalists transposing. So perhaps does Viadana's *Fratres, ego enim accepi/Accipite et manducate*:<sup>100</sup> it is for 'canto solo over cornetto', and the higher pitch, giving a range of d' to a'', clearly suits the instrument better. Yet as early as the mid-16th century we find Ganassi<sup>101</sup> instructing viol players in the art of transposition—for that is one of the functions of his fingering charts—albeit mostly by a tone up or down, though in one instance a 4th up. Virgiliano (c1600)<sup>102</sup>

Table 2	n	ormal clefs		high clefs
	up	down	up	down
viol	2nd	2nd, min. 3rd		4th, 5th, maj. 6th, min. 7th
cornett & trombone	2nd	2nd, min. 3rd		4th, 5th, maj. 6th, min. 7th
cornett	2nd, 5th	2nd, min. 3rd	2nd	4th, 5th, maj. 6th, min. 7th
flute	4th	4th, 5th		4th, 5th
recorder	2nd	2nd, min. 3rd, 4th	-	4th, 5th, maj. 6th, min. 7th

gives comparable directions for players of the viol, cornett, recorder and trombone, but with a much wider range of transposition (see table 2 above). (It is worth noting that the 'easy' transposition down a 3rd, once mistakenly associated with high-clef notation,<sup>103</sup> occurs only in connection with normal clefs.) Virgiliano also gives 13 solo ricercares for a choice of instrument (recorder, flute, cornett, violin and 'similar' instruments). One, lacking any indication of instrumentation, uses G2 and C3 clefs alternately and has a range of g to c'',<sup>104</sup> while all the others are notated in C1, twice in alternation with C4, both (b) and (-). Those that specify flute, violin and cornett have the range d to g", which suits only the flute (more particularly, the instrument which Praetorius calls a tenor/alto flute in D, sounding an octave higher) <sup>105</sup> and is clearly impossible for violin or cornett without transposition upwards. (Transposition up a 4th aligns these ranges reasonably well with those of the other ricercare.)

At first sight, the phrase 'Va sonata alla quarta alta' which appears against three items in Salamone Rossi's first collection of *Sinfonie et gagliarde* (1607)<sup>106</sup> may also appear to demand upward transposition. However, the pieces (two of which are for two 'viole' or two cornetts and basso continuo) are already in high clefs and the rubric is evidently a warning against (otherwise customary) downward transposition of a 4th. Thus, a further high-clef piece, with a higher range for the top part and no rubric, may be taken to imply downward transposition.

The ability of instrumentalists to transpose is even more certainly presupposed in Besard's *Novus partus* (1617).<sup>107</sup> The first section consists of 12 items involving three lutes (two of which can be shown to be in G, the other a 4th lower). Eleven of these, including dances and *simphoniae*, also have two or three parts in staff notation (in five instances for voices or instruments *ad libitum*). The apparent pitch of these parts coincides fully with that of the lutes in only two instances; all three pieces in high clefs (G2 and C4) lie a 5th above the lutes, while five in normal clefs lie a tone above. The remaining item, *Lachrimae J. Dooland*, has one part (in G2) a tone above the lutes and another (in F4) at the lutes' pitch. Thus Besard presumably expects transposition down a 5th and a tone to cause no difficulty.

The players most likely to have been fluent in the art of transposition, especially down a 4th and 5th, are those cornettists, trombonists and others who played regularly with choirs. As *maestro di cappella* at St Mark's, Venice, Zarlino (1573) must have expected this fluency from his colleagues:

... tali Trasportationi non sono utili solamente; ma sommamente necessarie anco ad ogni perito Organista, che serve alle Musiche choriste; & ad altri Sonatori similmente, che sonano altre sorti di istrumenti, per accommodare il suono di quelli alle Voci, le quali alle volte non possono ascendere, o discendere tanto, quanto ricercano i luoghi propii delli Modi accommodati sopra i detti istrumenti.

... such transpositions [up a 5th or down a 4th] are not only useful but highly necessary both to every skilled organist involved with choral music and similarly to other instrumentalists playing other sorts of instruments, in order to match their sound to voices, which sometimes cannot go as high or as low as the proper positions of the modes require when played on the said instruments.<sup>108</sup>

These ideas are elaborated by Zacconi (1592):

Et averta ogni uno che si come le voci humane, possano cantar una cantilena un Tuono piu alto, & un Tuono piu basso secondo che li torna commodo & che li pare è piace, che cosi ancora gl'Istrumenti possano sonar una cosa hora in un Tuono & hora nell'altro, per rispeto che tutti universalmente sono alti rispetto alle voci. Et cosi quando che con gl'Istrumenti si vogliano accompagnar le voci il piu delle volte per accommodarle, le si sonano alle seconda, alla terza, alla quarta & c. E però in questo caso quelli che li vogliano adoprare: se non ne hanno altra particular cognitione: almeno sappiano generalmente che i Tuoni harmoniali posti & collocati dentro alle lor corde naturali: si possano sonar un Tuono piu basso: & che li trasportati si possano fare alla quarta & alla quinta come si presuppone ch'egli da se stesso habbia da considerar queste cose.

And everyone [should] note that, just as voices can sing a song a tone higher or lower according to what proves comfortable for them and what seems pleasing to them, instruments too`can similarly play a piece now in one Tone and now in another, remembering that universally they are all high in relation to voices. And thus, when you want to accompany voices with instruments, in order to accommodate them you mostly play [at the distance of] a tone, 3rd or 4th etc. And therefore, in this case, those who wish to join in (if they have no further particular knowledge of it) should at least know that you can generally play the musical Tones given in their natural positions one tone lower and the transposed ones a 4th or 5th [lower], as anyone who has to consider these matters for himself would imagine.<sup>109</sup>

While in theory instrumentalists working with voices would be familiar with several intervals of transposition, in practice experience obviously varied from player to player:

Denn wenn irgend ein Cantor so denen Organisten im unrechten Clave folget, und dem singen den Anfang machet, ehe die StadtPfeiffer darzu kommen und mit anfangen, oder ehe sie zuvor in den Cornett oder Posaun stossen und den rechten Chormessigen Clavem dem Cantori geben, können sie sonderlich auff den Cornetten oder Geigen, so vor sich zum Chor und rechten Clave gestimmet, nicht fort kommen, weil ihnen die transpositio per Secundam und Tertiam nicht wol bekant, Sintemahl es etlichen sawer und schwehr gnug wird, einen Cantum per Quartam oder Quintam zu transponiren, und machen also wol gar eine Confusion, oder doch sonsten erbärmliche Arbeit.

For if any cantor follows the organist in the wrong key and initiates the singing before the wind players join in and begin, or before they blow their cornett or trombone and give the cantor the correct choral key, they cannot proceed, especially on cornetts or violins already tuned to the choir and to the correct key, because they are not very familiar with transposition by a tone or a 3rd; since for some it is painful and difficult enough to transpose a part by a 4th or a 5th, and they therefore cause quite a confusion, or at least do a miserable job.<sup>110</sup>

Evidently then, experienced players could be expected to transpose by a 4th or 5th when necessary, even if other intervals were generally to be avoided. In *Polyhymnia caduceatrix et panegyrica* (1619), Praetorius again presupposes some facility with transposition on the part of his instrumentalists:

Dieweil auch diese und alle andere Cantiones in Modo Hypojonico in Quartam oder Quintam inferiorem notwendig transponiret werden müssen: und in Quarta der Gesang allezeit frischer und anmutiger, den Organisten und Instrumentisten aber etwas schwerer als in Quinta ankömmt: so bin ich willens gewesen die Choros Instrumentales und Bassum Generalem in Quintam inferiorem gesetzet drucken zu lassen. Dieweil ich aber befunden, dass nicht so gar sehr geübte Instrumentisten sich fast weniger darein richten können, als wann es in seinem rechten Clave bleibt: und auch manchen solcher Tonus viel bequemer aus der Quinta als aus der Quart zu tractiren vorkömmt, auch oft die Höhe der Orgeln es nicht anders leiden will: so hab ichs in seinem rechten Tono bleiben lassen, damit ein jeder nach seinem eignen Gefallen und guten Gelegenheit damit procediren und gebaren könne.

Now, as these and all other *cantiones* in the Hypoionian mode must necessarily be transposed down a 4th or 5th—at the 4th the piece always becomes fresher and more spirited, but it is rather more difficult for the organists and instrumentalists than at the 5th—I intended to have the instrumental choirs and the continuo part printed a 5th lower. But as I have discovered that instrumentalists who are not so very experienced can manage almost less [well] than when it stays in its proper key and also for some such a Tone appears much more comfortable to deal with from the 5th than from the 4th—also the pitch of the organs will often not permit anything else—I have therefore left it in its proper key, so that each can proceed and act as he pleases and according to circumstance.<sup>111</sup>

Although some of Praetorius's statement may seem rather obscure, the opening is crystal clear and confirms the points made in Syntagma musicum (see above). Three of the high-clef pieces in question call for instrumental doubling of the vocal parts, while the remaining four have independent instrumental parts; all are in C major. It is difficult to imagine any notational problems resulting from a written-out transposition down a 5th to F major, whereas G major, with its sharp signature, may well have been considered less comfortable. It seems at least possible that a misprint causes the apparent obscurity: if, after the words 'Bassum Generalem', 'in Quartam' replaces 'in Quintam', Praetorius would appear to say that his intended transposition down a 4th created more (notational and technical) problems for the inexperienced player than an unwritten transposition down a 5th and was in any case not low enough for some organs.<sup>113</sup>

One important final example will serve to show incontrovertibly that in Italy, too, a composer of Monteverdi's time would expect instrumentalists to be able to transpose, at least down a 4th, just as Virgiliano's treatise implies (see above). *Hodie gloriosus Pater* (*a* 8) from a volume of motets by Sulpitia Cesis (1619)<sup>114</sup> is for two choirs: table 3 shows the distribution of the parts. Despite the 'normal' upper and lowest clefs (C1/C2 and F4), the piece is to be performed down a 4th; hence the unusually precise instructions. Choir I is for three voices (all female?) and 'violone', while

#### Table 3

Choir I	Choir II
C1 [voice]	C2 per il cornetto alla quarta bassa, ma però sempre si sona sù l'ottava alta
C2 [voice]	C4 altus per il Trombone alla quarta bassa
C3 tenor all'ottava alta	C4 per il trombone alla quarta bassa
F3 alla quarta bassa per il violone	F4 Contra basso alla quarta per l'Arciviolone

choir II is purely instrumental. The cornett, and the vocal 'tenor', effectively transpose up a 5th, one of the intervals of transposition given by Virgiliano for the cornett (see above), while the two trombones and the two stringed instruments play down a 4th.

#### Monteverdi's Magnificat a 7: Instruments

Just as we have conjectured that *Orfeo* and the Vespers (1610) were written with some of the same singers in mind, so we may imagine that perhaps some of the same virtuoso violinists and cornettists took part in each work. Ex.17 gives the ranges of five of the instruments in the Magnificat *a* 7: (*a*) at notated pitch, and (*b*) transposed down a 4th; these may be compared with their equivalents in (*c*) the *Sonata sopra 'Sancta Maria'* and in (*d*) 'Possente spirto' from *Orfeo*, Act III. The consistency in range demonstrated by this transposition is quite striking; the consistency of tessitura is no less impressive (ex.18).

Let us look in a little more detail at some of the technical aspects of these instruments. First, the cornett. Zacconi (1592),<sup>115</sup> Praetorius (1618)<sup>116</sup> and

Ex.17 Instrumental ranges in (a) Magnificat a 7 (1610), as notated, (b) Magnificat a 7 (1610), transposed down a 4th, (c) Sonata sopra 'Sancta Maria' and (d) Orfeo, 'Possente spirto'



\* Elsewhere in Orfeo (in the ritornello which opens Act V) the bass violin is taken down to D

Rognoni (1620)<sup>117</sup> all write of a basic two-octave range of a to a" which can be extended upwards according to individual ability by four and even six notes. (Mersenne (1636–7) gives the instrument's range as c'-d''',<sup>118</sup> Bismantova  $(1677-9)^{119}$  describes a''-d''' as 'note sforzzate', and Speer  $(1697)^{120}$  gives a range up to c'''.) Yet the surviving music of Giovanni Gabrieli,<sup>121</sup> who had at his disposal possibly the best wind players in Italy, never exceeds b"; and, typically, that note occurs just once in the virtuoso cornett writing of Praetorius's elaborate setting of Wachet auf.<sup>122</sup> In the solo cornett literature of the early 17th century, where one may expect to find innovations and displays of virtuosity. c''' appears infrequently and d''' not at all; Marini (1617) writes only up to b'', <sup>123</sup> while Picchi (1625), <sup>124</sup> Marini  $(1629)^{125}$  and Fontana  $(1641)^{126}$  seem to be the earliest to write c''' (Marini also has a c''' sharp). As ex.17 shows, the unprecedentedly virtuoso writing of

Ex.18 (a) and (c) Magnificat a 7 (1610), 'Deposuit', transposed down a 4th; (b) and (d) Orfeo, Act III



508 EARLY MUSIC NOVEMBER 1984

the Sonata sopra 'Sancta Maria' and also of Orfeo takes the instrument only to a''. (An isolated b''' occurs in Deus in adiutorium (Domine ad adiuvandum), which in any case is in origin a trumpet part a tone lower.) Untransposed, the two cornett parts in the Magnificat a 7 are clearly anomalous.

In a transposed Magnificat *a* 7, however, the low range of cornett III may cause some disbelief (ex.19).

Ex.19 Range of cornett III in the Magnificat a 7 (1610), (a) as notated, and (b) transposed down a 4th  $\label{eq:angle}$ 



Yet the cornett III part of Giovanni Gabrieli's equally 'brilliant' motet *In ecclesiis a* 15<sup>127</sup> has a similar tessitura and range (ex.20). It may well be that in both cases a tenor cornett is intended; just as the term 'viola' or 'viola da brazzo' in the 1610 publication serves without further designation for two (or probably three)<sup>128</sup> different sizes of instrument, so 'cornett' may refer generically to the family of instruments rather than to a specific size. The tenor cornett was certainly more

Ex.20 Range of cornett III in G. Gabrieli, In ecclesiis



common than modern performances of late 16th- and early 17th-century music might suggest, 129 but low playing on the treble cornett is also a possibility, especially as the doubling of vocal parts in C1 and C2 clefs had long been one of the instrument's main functions. Virgiliano seems to give a fingering for  $g_{1}^{130}$ Praetorius recognizes both g and f as possibilities,<sup>131</sup> and Marini (1629) writes g once and a several times in the fourth part of his 'Canzone prima per quatro Violini ò Cornetti'.<sup>132</sup> These two notes occur only in Monteverdi's final 'Amen', where the instrument is doubling a vocal line (the g twice and the f once) and in any case the player could, as Cesis specifies (see above) and as Praetorius may imply,<sup>133</sup> play in the higher octave without difficulty; such octave doubling is, after all, not uncommon in polychoral music of the time.<sup>134</sup>

The pairs of wind instruments that make brief appearances in 'Quia respexit' may seem to contribute little to the argument, as flutes (if indeed the terms 'fifara' and 'pifara' here indicate flutes), trombones and recorders of appropriate sizes can be chosen to serve the music well at either pitch (ex.21). But the ordinary Ex.21 Instrumental ranges in the Magnificat a 7 (1610), (a) as notated, and (b) transposed down a 4th



flute of the early 17th century was the tenor/alto in D with a normal range of two octaves (d'-d''').<sup>135</sup> It was treated as an octave transposing instrument, and thus the untransposed writing of the Magnificat a 7 would either exceed the normal upper limit by a few notes or, exceptionally, have to be played at the lower octave. Transposed, the parts lie comfortably in the upper half of the flute. On the other hand, it is true that, after transposition, the lower trombone part in this section has a range which might make us expect the designation 'trombone doppio' (as in the Sonata sopra 'Sancta Maria), rather than merely 'trombone'136 (ex.22), but as with the violin and cornett families, a complete and consistent nomenclature is not to be expected; after all, the lowest of the three trombone parts in the opening respond ('Domine ad adiuvandum') is marked simply 'trombone'.137

Ex.22 Range of trombone in the Magnificat a 7 (1610, (a) as notated, and (b) transposed down a 4th, and in (c) Sonata sopra 'Sancta Maria'



Next, the strings. In first position, the violin's highest note is b", but an extension makes c" possible without shifting.<sup>138</sup> The violin writing in Orfeo has b" as its top note, while c''' comes just once in the Sonata sopra 'Sancta Maria'<sup>139</sup> and is used sparingly by Monteverdi elsewhere in his output.<sup>140</sup> The note d''' is even rarer<sup>141</sup> and no higher written note occurs anywhere in his surviving work outside the Magnificat a 7. By contrast, in the untransposed Magnificat a 7 c'''appears regularly, violin I has d''' in four of its five obbligato sections (see ex.1b), violin II has the note in two sections, and both have one e''' flat. I have already noted an instrumental work of 1607 by the Mantuan composer Rossi requiring downward transposition; its violin part goes to written d''', a note which appears nowhere else in the publication. Even a decade later in his op.1 (1617), Biagio Marini,<sup>142</sup> then a violinist under

Monteverdi at St Mark's, Venice, does not write beyond first position; b'' is his normal top note and c'''occurs in just one item. But by the time of the same composer's op.8 (1629), c''' has become the most frequent upper extreme, while two pieces go to d"" and one as far as e'''.<sup>143</sup> Comparable ranges are called for by another composer with Mantuan connections, Giovanni Battista Buonamente (1626)<sup>144</sup> and by Tarquinio Merula  $(c_{1}6_{3}1-3)$ ,<sup>145</sup> and it may be significant that all three composers had by then spent several years working north of the Alps. Despite some apparent anomalies in Giovanni Gabrieli's posthumous Canzoni e sonate (1615),<sup>146</sup> it would seem from a provisional survey of early 17th-century Italian string music that composers probably did not begin to write for the violin beyond first position until sometime in the 1620s. Even then it was very much the norm not to demand shifting; Castello's music (1621 and 1629), for example, never exceeds  $c'''^{147}$  and even Merula (1637) stays within this limit.<sup>148</sup> Against this background, it seems strange that Monteverdi (and his Mantuan players) might have been responsible for initiating these revolutionary experiments in violin technique, only to abandon them almost wholly to younger colleagues.

Only one other stringed instrument is called for in the Magnificat a 7: a bass 'Viuola da Brazzo'. Here there are perhaps fewer easy points of comparison because of the general confusion surrounding the terminology and nature of bass stringed instruments at this time. But downward transposition has two clear effects on the part. First, it brings all the music into first position, in line with all Monteverdi's other writing for the instrument (notably in the *Sonata sopra 'Sancta Maria'*); second, it gives the instrument a single, idiomatic *C* (almost certainly its lowest open string and in any case a note that occurs in the *Sonata*) at a place where the organ has *c* (ex.23).<sup>149</sup>

To transpose Monteverdi's Magnificat a 7 down a 4th is thus to remove several apparent anomalies (and probable anachronisms) from the instrumental writing without creating any new ones (unless the lowness of

cornett III be such). This in itself is surely suggestive, as the similar transposition of any comparably complex instrumental music (for example, the *Sonata sopra Sancta Maria*) would almost inevitably produce insoluble problems.

### High-clef notation

It would be unreasonable to conclude without touching briefly on the question of why Monteverdi used high clefs in the first place. With Schonsleder (1631),<sup>150</sup> we may well still find ourselves 'amazed to see the majority of musicians customarily writing many of their songs in them, although they know that if anyone wishes to sing them they will have to be transposed downwards'. The subject is a vast and intricate one and as yet there has been no definitive study. Matters of compositional technique, notational practice, modal theory and pitch-standard are all involved, and the four high-clef pieces in Monteverdi's 1610 Mass and Vespers perhaps reflect some of this diversity.

The 1610 Mass is a rigorous re-working of ten *fughe* from Gombert's motet *In illo tempore*. Parody works of this type almost always retain the notated pitch-level, and therefore clefs, of their models; Monteverdi's is no exception and we therefore need look no further for an explanation of his choice of high clefs in that work.

In the conservative *Lauda Jerusalem* the chant is presented in the tenor, first untransposed and later a 4th higher; these are its two traditional written levels (the only ones that remain strictly within the gamut) and it may well be that Monteverdi chose the written pitch of his setting accordingly. In both the Mass and psalm, to have written at the intended sounding pitch (a 4th lower) would not only have altered the given material but, more important, would also have introduced an undesirable signature of one sharp.

The apparent incongruity of dazzling, up-to-date instrumental writing in imminently obsolescent highclef notation may seem a central problem with the Magnificat a 7. Yet, particularly if we are correct in thinking that Monteverdi intentionally reproduced Gombert's written pitch in his Mass, an explanation

Ex.23 Magnificat a 7 (1610), 'Fecit potentiam', transposed down a 4th, (a) viuola da brazzo, and (b) bassus generalis



may be that here, too, he wished to preserve the written pitch of his model. Analysis of the two Magnificats 'strongly suggests that the smaller six-voice setting served as the basis for the larger one with instruments',<sup>151</sup> and thus it would have been natural for Monteverdi to compose his more elaborate work at the pitch of the earlier one.

One puzzle remains. Why is the Magnificat a 6 in high clefs? Here the chant (Psalm Tone 1) is mostly used transposed up a 4th, often in alternation with an untransposed version. However, the traditional alternative level of the chant is not up but down a 4th. Has Monteverdi chosen to transpose the chant up only for performers to perform it down? There are no obvious notational difficulties with the lower (performing) pitch as there are in the Mass and Lauda Jerusalem; the flat signature would simply disappear and the remotest accidental would sharpen G rather than C. Either the choice of high clefs was almost arbitrary-it was a perfectly common form of notation presenting no problems to singers or organist-or it was dictated by reasons of modal theory still obscure to us. (Interestingly enough, it seems that 'as the 16th century wore on interest in and evidence for modality of any kind in the polyphonic repertory increased rather than lessened'.)152

Considerations of this nature may seem to conflict with the modernity and freedom of Monteverdi's *concertato* music, but more probably they were ingrained in the thinking of a composer in his early 40s whose first publication<sup>153</sup> had pronounced him a pupil of Marc'Antonio Ingegneri. In any case he was undoubtedly sensitive to the criticisms by Giovanni Maria Artusi of his contrapuntal procedures<sup>154</sup> and an express purpose of the 1610 publication was, according to his preface, that 'claudantur ora in Claudium loquentium iniqua' (the mouths of those speaking unjustly against Claudio may be closed).

It is perhaps ironic that one of the more conservative features of such an innovatory publication should have caused Monteverdi to be so badly misrepresented later on.

Andrew Parrott is founder and director of the Taverner Choir, Consort and Players, with whom he records for EMI, and also a freelance conductor. Formerly director of music at Merton College, Oxford, he currently holds a Leverhulme Fellowship and in 1985 will become artistic director of the new European Baroque Orchestra based in Oxford.

<sup>1</sup>A BBC Promenade Concert (July 1977). The performers were the Taverner Choir and Players with various soloists. I am indebted to



5 The opening of Monteverdi's Vespers of 1610 in the original print: Cantus partbook

Hugh Keyte for instigating the performance and for his encouragement and advice at all stages. I am also grateful to many other colleagues, especially Clifford Bartlett, Bruce Dickey and Graham Dixon, for their assistance.

<sup>2</sup>John Eliot Gardiner, programme notes for performances in 1984 of the Vespers. In an interview for BBC Radio 3 (July 1984), Gardiner put forward his objections to the transpositions. First, 'such an academic formula seems to me foreign to his [Monteverdi's] nature'. Second, 'it would involve using a lower cornetto'. Third, 'I just think it sounds dull and wrong'.

<sup>3</sup>on EX 2701293

<sup>4</sup>The terms seem to derive from Giuseppe Paolucci, Arte pratica di contrappunto (Venice, 1765–72); see S. Hermelink, 'Chiavette', The New Grove.

<sup>5</sup>Claudio Monteverdi, Sanctissimae virgini missa senis vocibus ad ecclesiarum choros ac vespere pluribus decantandae, cum nonnullis sacris concentibus, ad sacella sive principum cubicula accommodata (Venice, 1610) (title from Bassus generalis; the other seven partbooks omit 'ad ecclesiarum choros').

<sup>6</sup>A. J. Ellis and A. Mendel, *Studies in the History of Musical Pitch* (Amsterdam, 1968); Mendel's contribution consists largely of reprints of his invaluable 'Pitch in the 16th and Early 17th Centuries', *MQ*, xxiv (1948), pp.28–45, 199–221, 336–57, 575–93. His later 'Pitch in Western Music since 1500: a Re-examination', *Acta musicologica*, 1, 1/2 (1978), pp.1–93, covers much of the same ground but often in less detail; all references to Mendel are therefore to his earlier work and give the pagination of the 1968 reprint.

<sup>7</sup>Gioseffo Zarlino, *Dimostrationi harmoniche* (Venice, 1571/*R* 1966), pp.309 and 311

<sup>8</sup>Michael Praetorius, *Syntagma musicum*, ii (Wolfenbüttel, 1618, 2/1619/*R* 1958), p.31, describes this procedure for enabling a tenor trombonist to read correctly for bass trombone.

<sup>9</sup>Pietro Cerone, *El melopeo y maestro* (Naples, 1613/*R* 1969), p.494 <sup>10</sup>Girolamo Diruta, *Seconda parte del transilvano* (Venice, 1609/*R* 1978), bk 3, p.1

<sup>11</sup>Ibid, p.4

<sup>12</sup>Diruta treats the eight Magnificat Tones similarly in a later chapter: *op cit*, bk 4, pp.7–16.

<sup>13</sup>Juan Bermudo, *El libro llamado declaración de instrumentos musicales* (Osuna, 1555/*R* 1957), bk 4, ch.26, ff.73v-74, gives instructions for playing the modes up a 2nd, 4th and 5th, and down a 2nd and a minor 3rd. Later, Thomas Morley writes that certain transpositions were often required for ease of the singers (*A Plaine and Easie Introduction to Practicall Musiche* (London, 1597, p.156). Jean Denis, *Traité de l'accord de l'espinette* (Paris, 2/1650), p.19; facs. ed. A. Curtis (New York, 1969), tells how his teacher, the organist of the Ste Chappelle in Paris, Florent le Bienvenu (1568–1623), would play the Magnificat chant in one key 'pour la commodité des Chantres' but his solo verses in another, avoiding 'bad' keys.

 $^{14}$ Vincenzo Galilei, Dialogo della musica antica et della moderna (Florence, 1581/R 1968), p.87

<sup>15</sup>Gian Paulo Cima, *Partito de ricercari & canzoni alla francese* (Milan, 1606), p.73; ed. C. G. Rayner, CEKM, xx (Rome, 1969), p.62

 $^{16}\mbox{A.}$  and G. Gabrieli, Intonationi d'organo . . . libro primo (Venice, 1593)

<sup>17</sup>Zarlino, Le istitutioni harmoniche (Venice, 1558/R 1965, rev. 3 /1573/R 1966), p.391

<sup>18</sup>Galilei, op cit, p.87; see O. Strunk, Source Readings in Music History (New York, 1950), p.314.

<sup>19</sup>Rocco Rodio, *Regole di musica* (Naples, 1609), pp.86–8 (this edition also bears the date 1611 on its final page). The section in question, headed '*Come per musica finta si ponno fare gl'istessi tuoni in altri luoghi*', is an addition to the original publication of 1600. See Mendel, *op cit*, pp.153–4, who takes Rodio as providing evidence against the principle of the downward transposition of high-clef music; in fact, the subject is not mentioned.

<sup>20</sup>Cerone, *op cit*, pp.922 and 925

<sup>21</sup>Agostino Agazzari, *Del sonare sopra'l basso* (Siena, 1607/R 1969), p.10; see Strunk, op cit, pp.429-30.

<sup>22</sup>Praetorius, *Syntagma musicum*, iii (Wolfenbüttel, 1619/R 1958), pp.80–81; cited in Mendel, *op cit*, pp.140–41

<sup>23</sup>Ibid, p.136

<sup>24</sup>Only Morley in England advises against such transpositions; he thus at least implies the existence of such a practice.

<sup>25</sup>Volupius Decorus [pseud. of Wolfgang Schonsleder], Architectonice musices universalis (Ingolstadt, 1631), pp.66ff; cited in Mendel, op cit, p.230, in an addition to his original article

<sup>26</sup>Lorenzo Penna, *Li primi albori musicali* (Bologna, 1672, 5/1696), pp.188–96

<sup>27</sup>Bartolomeo Bismantova, *Compendio musicale* (manuscript treatise, Ferrara, 1677–9: Biblioteca Municipale di Reggio Emilia/facs. edn Florence, 1978), pp.[84–6] (*Del suonare Spostato*)

<sup>28</sup>Johann Baptist Samber, Continuatio ad manuductionem organicam (Salzburg, 1707), p.143; cited in Mendel, op cit, p.140

<sup>29</sup>Paolucci, *op cit*, i, pp.184–5 and 231; iii, pp.173–4 and 215; cited in Mendel, *op cit*, p.130

<sup>30</sup>Quirinus van Blankenburg, *Elementa musica* (The Hague, 1739/*R* 1973), p.142; cited in Mendel, *op cit*, p.179

<sup>31</sup>See Mendel, op cit, pp.170–86.

<sup>32</sup>The Russell Collection and Other Early Keyboard Instruments in Saint Cecilia's Hall, Edinburgh (Edinburgh, 1968), pp.12–15

<sup>33</sup>J. H. van der Meer, 'More about Flemish Two-manual Harpsichords', *Keyboard Instruments: Studies in Keyboard Organology 1500– 1800*, ed. E. M. Ripin (Edinburgh, 1971/*R* New York, 1977), pp.50–52

<sup>34</sup>See R. T. Shann, 'Flemish transposing harpsichords: an explanation', *GSJ*, xxxvii (1984), pp.62–71.

<sup>35</sup>J. D. Shortridge, *Italian Harpsichord Building in the 16th and 17th Centuries* (Washington, DC, 1960), J. Barnes, 'Pitch Variations in Italian Keyboard Instruments', *GSJ*, xviii (1965), pp.110–16, and J.

#### 512 EARLY MUSIC NOVEMBER 1984



#### 6 Vespers of 1610: Sextus partbook

Barnes, 'The Specious Uniformity of Italian Harpsichords', ed. Ripin, op cit, pp.1–10

<sup>36</sup>W. R. Thomas and J. J. K. Rhodes, 'The String Scales of Italian Instruments', *GSJ*, xx (1967), pp.48–62, and J. H. van der Meer, 'Harpsichord Making and Metallurgy: a Rejoinder', *GSJ*, xxi (1968), pp.175–8

<sup>37</sup>Adriano Banchieri, *Conclusioni nel suono dell'organo* (Bologna, 1608/R 1934), pp.94–5. Cf. the interrelationship of the differentsized instruments built by the Ruckers family; see G. G. O'Brien, 'Ioannes and Andreas Ruckers', *EM*, vii (1979), pp.453–66.

<sup>38</sup>Praetorius, Syntagma musicum, ii, p.62

<sup>39</sup>Praetorius, *Theatrum instrumentorum* (Wolfenbüttel, 1620/R 1958), pl.VI

<sup>40</sup>T. Beckerleg, 'The Fitzwilliam Museum Harpsichord', Italian Music at the Fitzwilliam (Cambridge, 1976), pp.24f

<sup>41</sup>See G. Kinsky, Musikhistorisches Museum von Wilhelm Heyer in Cöln: Katalog, i (Cologne, 1910), no.310.

<sup>42</sup>The harpsichord by Hans Müller (Leipzig, 1537), now in the Museo degli Strumenti Musicali in Rome, has a keyboard that could be shifted by a tone. See L. Cervelli and J. H. van der Meer, *Conservato a Roma il più antico clavicembalo* (Rome, 1967).

<sup>43</sup>Praetorius, *Syntagma musicum*, ii, pp.63–6. Giovanni Valentini (see *The New Grove*) is known to have performed on this instrument in 1617.

<sup>44</sup>Giovanni Battista Doni, *Compendio del trattato de' generi e de' modi della musica* (Rome, 1635), p.70

<sup>45</sup>Giovanni Pierluigi da Palestrina, *Missarum liber secundus* (Rome, 1567); *Le opere complete*, iv, pp.1–25

<sup>46</sup>Claude Le Jeune, *Dodécacorde* (La Rochelle, 1598)

<sup>47</sup>Stefano Landi, *Il Sant'Alessio* (Rome, 1634/R 1970)

<sup>48</sup>Wroclaw, *olim* Stadtbibliothek, Ms.mus.CI.1238 (presumably destroyed in World War II) and Jacobus Gallus [Handl], *Missarum V.vocum liber III* (Prague, 1580), no.9; ed. in DTÖ, cxix, pp.30ff and 103ff <sup>49</sup>Bernhart Schmid, Zwey Bücher. Einer neuen kunstlichen Tabulatur auff Orgel und Instrument (Strasbourg, 1577). Contents listed, with details of transposition, in W. Merian, Der Tanz in den deutschen Tabulaturbüchern (Leipzig, 1927). All the works are by Lassus, except for Crecquillon's chanson Si me tenes (RISM, 1545<sup>14</sup>), f.14, and the motet Hierusalem luge (RISM 1532<sup>9</sup>), p.49, by Richafort or Lupus.

<sup>50</sup>Jacob Paix, *Ein schön nutz unnd gebreüchlich Orgel Tabulaturbuch* (Lauingen, 1583). The index, listing transposition degrees, is reprinted in Merian, *op cit*, p.116. The 24 motets are mostly by Lassus and Palestrina, with one each by Josquin, Senfl and Clemens non Papa. In addition, there are three whose original I have been unable to trace: two by Paix himself (*Jubilate Domino* and *Domine quid multiplicati sunt*) and an *Ave Maria* by one 'Riccius' (perhaps Teodore Riccio). Although the transposition degree of these three is known, the original clefs are not, so they are omitted from the statistics. (One is untransposed, one down a 4th and one down a 5th.)

<sup>51</sup>Emanuel Adriaenssen, Pratum musicum (Antwerp, 1584/R Buren, 1977); partly ed. in Monumenta musicae belgicae, (Antwerp, 1966). Contents listed in H. M. Brown, Instrumental Music Printed Before 1600: a Bibliography (Cambridge, Mass., 1965), pp.334-7 (15846). The 27 items discussed below are nos.6-32 in Brown. Adriaenssen prints a lute intabulation and the top and bottom parts of 27 madrigals and chansons. Those which I have checked (nos.6-8, 10-11, 14, 16, 21-2, 24-5, 27-31) retain their original clefs, so it seems likely that the others do. There are 15 with clefs C1 and F4 (i.e. normal clefs); of these, 14 have the lute part at the same pitch (assuming a lute in G tuning) and one has the lute a tone higher. (It could be argued that this is to avoid the difficulty of playing a piece in F on an instrument with a bottom string G; but elsewhere Adriaenssen uses a seventh course.) There are ten with high clefs (eight have G2 and F3 and two have G2 and C4): all are transposed downwards. Two (both with flat signatures) are transposed down a tone; both are in G minor, so there would have been difficulties in keeping the bass notes on the instrument, had they been put down a 4th into D minor. Two (both without flat signatures) are transposed down a 5th. Six are transposed down a 4th (three with a flat and three without). In addition, there is one with C1 and C4 clefs, which goes down a 4th, and one (Lassus's popular Susann'un jour), using G2 and C4 clefs, which goes down a tone.

The rest of the publication clearly shows that high-clef pieces are lowered, though it offers no examples of transposition down a 5th. A group of three-voice works mostly in C1, C2 or C3, and C4 clefs is transposed down a tone, though two examples with a G2 clef go down a 4th; the two famous pieces by Hubert Waelrant for four voices and four lutes, in normal clefs, are untransposed if we assume lutes in G, F, D and C, or up a tone if the lutes are in A, G, F and D. The two settings for two lutes a tone apart (nos.33 and 34) require instruments in A and G to give the expected transposition of a 4th down for the first and to preserve the original pitch for the second. Whatever the absolute pitch relationship between lute tuning and the pitch implied by the vocal notation, the intention to bring high-clef works to the level of normal-clef ones is clear.

<sup>52</sup>(Rome, 1586, rev. 2/1592/R Bologna, 1971). There was also an edition of 1586 without the keyboard and lute versions. Nanino's *Jesu spes penitentibus* and four other items from the collection are transcribed in H. Haack, *Anfänge des Generalbass-satzes* (Tutzing, 1974), Notenteil, pp.82–6.

<sup>53</sup>(Rome, 1595/*R* Bologna, 1971); contents listed in Brown, *op cit*, p.406 (1595<sup>10</sup>). According to Mendel, *op cit*, p.149, Verovio's *Ghirlanda di fioretti musicali* (Rome, 1589) may contain similar examples.

<sup>54</sup>Il primo libro de madrigali (Venice, 1600)

<sup>55</sup>(Venice, 1602; Lib.II, 1607, Lib.III, 1609). Later German reprints combine all three volumes: A. Davidsson, *Catalogue critique et descriptif des imprimés de musique* (Uppsala, 1952), no.517, lists the complete contents from the Frankfurt edition of 1626. The solo motets from the 1602 edition ed. C. Gallico (Mantua and Kassel, 1964), (The transcriptions in Haack, *op cit*, are not accompanied by



#### 7 Vespers of 1610: Altus partbook

information on clefs and organ transposition adequate enough to be helpful.)

<sup>56</sup>(Rome, 1613), no.42, *Tanto tempore*, for two altos (C2( $\flat$ )) and no.157, *Qui sequitur me*, for two tenors (C3( $\flat$ ))

<sup>57</sup>Super magnae matris divino carmine Magnificat (Innsbruck, 1614), no.3; Magnificat 'Laudans exultans' a 8 (based on a motet by Giovanni Croce); ed. H. Junkermann in J. Stadlmayr: Selected Magnificats, Recent Researches in the Music of the Baroque Era, xxxv (Madison, Wisc., 1980), pp.74–105. The clefs of the voice parts are G2 C2 C3 F3(b) for each of the two choirs.

<sup>58</sup>Schütz, *Psalmen Davids* (Dresden, 1619), no.13; *Sämtliche Werke* (Leipzig, 1885–94, 1909, 1927/*R* 1968–73), ii, p.180

<sup>59</sup>Andrea and Giovanni Gabrieli, *Concerti . . . continenti musica di chiesa, madrigali, & altro* (Venice, 1587)

60(Dresden, 1636); Sämtliche Werke, xii

<sup>61</sup>It is not clear whether the inexperienced organist finds the notation difficult with a sharp signature, or whether Schütz is thinking of his difficulties with the 'bad' notes of a mean-tuned instrument. Diruta touches on the subject briefly (*op cit*, bk 4, p.16) and Praetorius more fully (*Syntagma musicum*, iii, p.81).

 $^{62}$ (Dresden, 1657); Sämtliche Werke, xii; no.7, Meine Seele erhebt den Herren, is for four voices in the clefs G2 C2 C3 C4(-), with the basso in continuo in F4(\*).

<sup>63</sup>This is the only work in the set notated with a G2 clef in the top part; it is this clef which is the clearest indication, not that of the lowest voice, which is F4 in seven of the other motets, F3 in three and C4 in one. Another work of Schütz's to use this transpositional convention is Also hat Gott die Welt geliebt (no.12 of Geistliche Chor-Music (Dresden, 1648); Sämtliche Werke, viii), which has voices in G2 C2 C3 C3 F3 clefs(–), while the basso continuo has an F4 clef (\*) and is transposed down a 4th. Five different intervals of transposition are evidently called for in Constantijn Huygens's anthology of solo songs, Pathodia sacra et profana (Paris, 1647); ed. F. Noske (Amsterdam, 1976). Before each item the singer's initial note is given in lute

tablature, despite the fact that the accompaniment is simply a bass line in staff notation. Assuming a G tuning, 21 of the 39 songs are untransposed and a further 11 are down a tone. Most of the basses use F4; the remainder are as follows:

F3 (--) down a 2nd

F3 (b) down a 4th

F3 (–) down a 5th

C4 (--) down a 5th (x3)

C4 (--) down a major 6th

64See n.55.

<sup>65</sup>(Strasbourg, 1611); cited in Mendel op cit, p.149

<sup>66</sup>Attempts to solve this problem by making instruments with separate keys for D sharp and E flat (and also G sharp and A flat) evidently date from the 15th century in Italy but seem to have been rarer in Germany (see Praetorius: *Syntagma musicum*, iii, p.81). The 1480 contract for an organ at Lucca cathedral specifies this solution (see M. Lindley, 'Fifteenth-Century Evidence for Meantone Temperament', *PRMA*, cii (1975–6), p.37), and more than a century later Diruta (*op cit*, bk. 4, p.16) records that 'In alcuni Organi vi sono li tasti scavezzi' (In some organs there are split keys). See also Wolfgang Caspar Printz, *Phrynis oder Satyrischer Componist* (Quedlinburg, 1676), ch.11, § 12ff; cited in Mendel, *op cit*, p.230. Italian harpsichords with keyboards of this type were quite common. As early as 1548 Zarlino (*Le istitutioni harmoniche*, p.164) had commissioned one with 19 notes to the octave.

<sup>67</sup>See J. Armstrong, 'The *Antiphonae, seu Sacrae Cantiones* (1613) of Giovanni Francesco Anerio: A Liturgical Study', *Analecta musicologica*, xiv (1974), pp.89–150.

<sup>68</sup>(Wolfenbüttel, 1619); *Gesamtausgabe*, xvii. The original clefs are listed on pp.xxxi-xxxiii.

<sup>69</sup>Quoted in full below.

<sup>70</sup>See above.

<sup>71</sup>(Leipzig, 1636); Sämtliche Werke, vi, nos.7, 8 and 18

<sup>72</sup>(Dresden, 1661); *Sämtliche Werke*, xvi (simple, four-voice settings of Cornelius Becker's versification of the psalms, not the polychoral settings of the 1619 *Psalmen Davids*)

<sup>73</sup>Mendel's analysis of the revisions (*op cit*, pp.144–7) is unfortunately based on the misleading edition by P. Spitta (H. Schütz, *Sämtliche Werke*, xvi). See S. Hermelink, 'Bemerkungen zur Schütz-Edition', *Musikalische Edition im Wandel des historischen Bewusstseins*, ed. T. G. Georgiades (Kassel, 1971), pp.207–9 and 214–5.

<sup>74</sup>See U. Prinz, 'Anmerkungen zur Neuausgabe des "Beckerschen Psalters" von Heinrich Schütz', *Musikforschung*, xxv (1972), pp.175– 81.

<sup>75</sup>See Praetorius's comments in *Syntagma musicum*, ii, pp.16–17.
 <sup>76</sup>Syntagma musicum, iii, p.82. See also Praetorius's arguments in

(Syntagma musicum, ii, pp. 15–16; cited in Mendel, op cit, pp. 109–11). <sup>77</sup>The tenor part uses F3 just in 'Sicut locutus est'.

<sup>78</sup>Messa a quattro voci et salmi (Venice, 1650); Tutte le opere, xvi,

pp.211–26 <sup>79</sup>Viewing the Magnificat *a* 6 in isolation from the other Vesper music, however, a 'skilled organist' might perhaps be tempted to consider the alternative interval of a minor 3rd, as the alto part does not lie at all high, and the three lowest voices descend rather low.

<sup>80</sup>Giovanni Battista Martini, *Esemplare* ..., ii (Bologna, 1775), pp.242–50

<sup>81</sup>See J. G. Kurtzman, *Essays on the Monteverdi Mass and Vespers of 1610* (Houston, 1978), pp.9 and 38. These late transpositions are unlikely to have been affected directly by changes in pitch standard in the century and a half after 1610, when pitch seems rather to have moved downwards (by perhaps as much as a tone); it might be argued, though, that such a change would have ruled out transposition down a 5th.

<sup>82</sup>The possible temptation to lower *Lauda Jerusalem* by a minor 3rd rather than a 4th can easily be resisted because of the prominent major triads on F sharp that this would create for the continuo, quite



#### 8 Vespers of 1610: Tenor partbook

apart from the probability of an uncomfortable transition from a closing F sharp major chord to the ensuing antiphon or antiphon substitute. (In the publication the psalm is followed by the *Sonata sopra 'Sancta Maria'*, which opens in G major.)

<sup>83</sup>On the words 'aurora' and 'coelos', bars 14 and 22

<sup>84</sup>The note occurs once in *Selva morale e spirituale* (Venice, 1640 [1641]), in *Laudate pueri* ii (*Tutte le opere*, xv, p.472, bar 127) and once in *Messa a quattro voci et salmi* (1650), in *Dixit* [i] (*Tutte le opere*, xvi, p.73, bar 116); both occurrences are brief. When transposed, the 1610 Mass has two Gs (Gloria, bar 42, and Credo, bar 34) and one A (Agnus Dei a 7, bar 49) (*Tutte le opere*, xvi, pp.73, bars 86 and 121); these are also brief.

<sup>85</sup>Giulio Caccini, *Nuove musiche e nuova maniera di scriverle* (Florence, 1614); ed. H. W. Hitchcock in Recent Researches in the Music of the Barogue Era, xxviii (Madison, Wisc., 1978), pp.64–77

<sup>86</sup>Gloria a 7, Dixit ii, Beatus ii, Laudate pueri ii and Magnificat i
<sup>87</sup>Both settings of Dixit, and Beatus vir

<sup>88</sup>Selva morale (1640); Tutte le opere, xv, pp.189–94. Cf. the bass parts in Schütz, Kleine geistliche Concerte (Leipzig, 1636).

<sup>89</sup>Tutte le opere, xii

<sup>90</sup>Madrigali guerrieri et amorosi (Venice, 1638); Tutte le opere, viii, pp.314-47

<sup>91</sup>Selva morale (1640); Tutte le opere, xv, pp.117-77

 $^{92}$ For the bass Praetorius also gives an F' which evidently some singers tried to reach, though without real success. He goes on to name three basses reputed to have been able to sing E' flat (*ibid*, p.17).

<sup>93</sup>*Ibid*, p. 15. The question of absolute pitch-standards in the early 17th century is, of course, an extremely complex one. W. R. Thomas and J. J. K. Rhodes ('Schlick, Praetorius and the History of Organ-Pitch', *Organ Yearbook*, ii (1971), pp.58–76) have used the evidence of Praetorius's woodcut of pipe dimensions (*Syntagma musicum*, ii, p.232) to propose *a*'= about 428 as his reference pitch. Recently, H. W. Myers ('Praetorius's Pitch', *EM*, xii (1984), pp.369–71) has pointed

out that the large majority of Praetorius's scale illustrations of wind instruments correspond closely to surviving examples of about a'=460; this may be the standard of most Nuremberg trombones, which Praetorius considered the most reliable guides to his own pitch (*Syntagma musicum*, ii, p.232). This is quite likely to have been roughly the same as Venetian pitch, but we cannot assume that it was therefore in use in Mantua too; Giovanni Battista Doni (*Annotazioni sopra il compendio* (Rome, 1640), pp.181–2; Mendel, *op cit*, p.236) differentiates (by suspiciously neat semitones) between the prevailing pitch standards of Naples, Rome, Florence, Lombardy and Venice, from low to high respectively (see also above and n.44).

<sup>94</sup>See I. Fenlon, 'The Monteverdi Vespers: Suggested Answers to Some Fundamental Questions', *EM*, v (1977), pp.380–87. Fenlon conjectures that a first performance took place in Mantua at S Andrea on 25 May 1608, but Kurtzman's objection (*op cit*, p.42) that such an occasion would not account for the dedication of the Vespers to the Virgin is a strong one.

<sup>95</sup>For Rasi as Orfeo, see T. Carter and D. Butchart, correspondence, *MT*, cxviii (1977), p.393. Marco da Gagliano mentions in the preface to *La Dafne* (Florence, 1608; ed. J. Erber (London, 1978)) that Rasi participated in the original performance in mid-February 1608; for the date, see S. Reiner, 'La vag'Angioletta', *Analecta musicologica*, xiv (1974), pp.53–6. Gagliano's solo writing is much more restrained than that of Monteverdi, so a more restricted range is to be expected.

<sup>96</sup>Syntagma musicum, ii, p.16. The translation of 'Grasemägde' is somewhat conjectural, cf. Mendel (*op cit*, p.112, n.45).

<sup>97</sup>Concerto: settimo libro de madrigali (Venice, 1619); Tutte le opere, vii, pp.14–34. The violin parts go up to c''' (which, at pitch, would have been manageable in first position, with extension) and down to e'.

<sup>98</sup>Psalmen Davids (Dresden, 1619), no.20; Sämtliche Werke, iii, p.101

99(Venice, 1640): information from Jerome Roche

<sup>100</sup>See above. The original notation is with G2 clef (b); the organ part is a 4th lower but is also cued at the same pitch as the upper part if it is to be played with a cornett.

<sup>101</sup>Sylvestro di Ganassi dal Fontego, Regola Rubertina (Venice, 1542)

<sup>102</sup>Aurelio Virgiliano, *Il dolcimelo* (manuscript treatise, c1600:
 Bologna, Civico Museo Bibliografico Musicale/facs. edn Florence,
 1979), pp.[98–9, 102–3, 105, 109, 111]. See also below.

<sup>103</sup>See Mendel, op cit, pp.129-32

<sup>104</sup>Op cit, p.[70]. This is an incomplete diminution on Palestrina's *Vestivi i colli*; editions in R. Erig, *Italienische Diminutionen* (Zurich, 1979), pp.347–76 and Virgiliano, *13 Ricercate* (London, 1980), p.72. The key and high clef derive from the original madrigal.

<sup>105</sup>Syntagma musicum, ii, p.22

<sup>106</sup>Salamone Rossi, *Il primo libro delle sinfonie et gagliarde* (Venice, 1607). Rossi, it should be remembered, was one of Monteverdi's colleagues at Mantua, though it is unlikely that, as a Jew, he would have been involved in any church music-making.

<sup>107</sup>Jean-Baptiste Besard, *Novus partus, sive Concertationes musicae* (Augsburg, 1617). See J. Sutton, 'The Music of J. B. Besard's *Novus partus*, 1617', *JAMS*, xix (1966), pp.182–204.

<sup>108</sup>Zarlino, Le istitutioni harmoniche, p.390

<sup>109</sup>Lodovico Zacconi, Prattica di musica (Venice, 1592/R 1967), f.218v

<sup>110</sup>Praetorius, Syntagma musicum, ii, p.):(9

<sup>111</sup>(Wolfenbüttel, 1619), no.15, introductory para. 6; Gesamtausgabe, xvii, p.110

<sup>112</sup>Compare Schütz's observations above.

<sup>113</sup>There is reason to believe that early 17th-century organ pitch in Germany tended to approximate to the highest levels known in Italy; thus, transposition down a 5th might have been more useful and therefore more common there. See n.93.

<sup>114</sup>*Motetti spirituali* (Modena, 1619). Cesis was a nun at the convent of S Agostino in Modena.

<sup>115</sup>Op cit, f.218v <sup>116</sup>Praetorius, Syntagma musicum, ii, p.36

<sup>117</sup>Francesco Rognoni Taeggio, Selva de varii pasaggi (Milan,



# 9 Vespers of 1610: Quintus partbook

1620/R 1978), pt 2, p.[2]

<sup>118</sup>Marin Mersenne, *Harmonie universelle* (Paris, 1636-7/R 1963), iii, p.273. Later (p.275), Mersenne mentions that Quiclet and others can reach two notes higher.

<sup>119</sup>Bismantova, op cit, pp.[108–9]

<sup>120</sup>Daniel Speer, Grund-richtiger . . . Unterricht der musicalischen Kunst, oder Vierfaches musicalisches Kleeblatt (Ulm, 1697/R 1974), p.232

<sup>121</sup>See the parts with designations in *Sacrae symphoniae* (Venice, 1597) and *Canzoni et sonate* (Venice, 1615).

<sup>122</sup>Praetorius, *Polyhymnia caduceatrix et panegyrica* (Wolfenbüttel, 1619), no.21

<sup>123</sup>Biagio Marini, Affetti musicali (Venice, 1617)

<sup>124</sup>Giovanni Picchi, Canzoni da sonar (Venice, 1625)

<sup>125</sup>Marini, Sonate, symphonie ... e retornelli (Venice, 1629)

<sup>126</sup>Giovanni Battista Fontana, *Sonate* (Venice, 1641). This is a posthumous publication; the composer died c1630.

<sup>127</sup>G. Gabrieli, Symphoniae sacrae (Venice, 1615), no.26

<sup>128</sup>(Excluding its exceptional use for violin II at the start of the Magnificat *a* 7.) I leave aside here the question of a 'tenor' or 'small bass' violin (tuned an octave or a 9th below the treble violin), which I believe was common at this period in Italy and which must be the intended alternative to trombone II in the *Sonata sopra 'Sancta Maria'*.

<sup>129</sup>An inventory of the Stuttgart *Hofkapelle* in 1589 lists '4 grosse gerade Zinken, 3 Tonos niederer, seindt in der Kappel zu dem Alt zu gebrauchen' (4 big straight cornetts, 3 notes lower [than the previously mentioned 6 mute cornetts at choir pitch], to be used in the *Kapelle* for the alto part), (see G. Bossert, *Württembergische Vierteljahrsheft für Landesgeschichte*, new ser., xxi (1912)). Viadana, in a note in the *Basso generale per l'organo* book of his *Salmi a quattro chori* (Venice, 1612), recommends 'Cornetti storti' ('crooked' cornetts) for C2 and C3 parts in two of the four choirs. Praetorius, however, disliked the instrument (*Syntagma musicum*, ii, p.36):

Corno vel Cornetto torto, sonsten Cornon genand, ist ein grosser Zinck, bald wie ein S formiret, unnd ist ein Quint Tieffer, alss ein rechter gemeiner Zinck; unnd wiewol etzliche meynen, dieser gebe nicht mehr alss 11. Natürlicher Thon oder Stimmen, und kein falsett drüber; So befindet sichs doch anders, denn er gleicher gestald, als die gemeine Zincken 15. Thon von sich gibet. Aber weil der Resonanz gar unlieblich und hornhafftig, so halt ich mehr darvon, das man eine Posaun an dessen stad gebrauche.

The como or cometto torto, also called comon, is a large cornett, shaped rather like an S, and is a 5th lower than the ordinary cornett; and although some maintain that it has no more than 11 natural notes, and no falsetto above, this in fact not the case, for just like the ordinary cornett it has 15 notes. But because the resonance is quite unlovely and horn-like, I consider it better to use a trombone in its place.

The range he gives for the instrument (*ibid*, p.22) is c/d-d'', while Zacconi (*op cit*, f.218*v*) gives the narrower range up to g'.

130Virgiliano, op cit, pp.[102-3]

131Praetorius, Syntagma musicum, ii, p.36

<sup>132</sup>Marini, op cit (1629)

<sup>133</sup>Praetorius allows certain alto or tenor parts to be sung an octave up by a boy (*Syntagma musicum*, iii, p.158) and Viadana suggests performing a C3 part 'con Violini all'ottava' (*Salmi a quattro chori*, (Venice, 1612)).

<sup>134</sup>In Schütz's reworking of G. Gabrieli's *Lieto godea, Ich danke dem Herm* (see n.58) the instruments simply double the voices, mostly up an octave, and in G. Gabrieli's *Jubilate Deo a* 10 (*Symphoniae sacrae*... *liber secundus* (Venice, 1615) a cornett doubles a lower part two octaves higher.

<sup>135</sup>See, for example, Praetorius, Syntagma musicum, ii, p.22.

<sup>136</sup>The range in the other movement of the Magnificat a 7 in which the instrument appears, 'Sicut locutus est', is similar, but with some written top d's.

<sup>137</sup>Praetorius's 'trombone doppia' is a lower instrument than Monteverdi's music requires, but he also describes the more common 'Quart-Posaun', a 4th or 5th below the ordinary (tenor) trombone, with a normal range of over two octaves down from *c*'; this seems most suited for Monteverdi's music. (*Syntagma musicum*, ii, pp.31–2.)

<sup>138</sup>This semitone extension is shown by the figure '5' in the tablatures found in Gasparo Zannetti, *Il scolaro* (Milan, 1645)

<sup>139</sup>Bar 49, violin II

 $^{140}\mbox{For example, in only three passages in Selva morale}$ 

<sup>141</sup>It occurs in one passage in *Selva morale*, in one bar in the posthumous *Messa et salmi*, and just once in *Madrigali guerrieri et amorosi* (Venice, 1638). The instrumental parts Malipiero prints in Act II, scene 3 of *L'incoronazione di Poppea* (*Tutte le opre*, xiii, pp. 130–34) come from the Naples manuscript—the 'autograph' has a bass line and blank staves above—so the *d'''* cannot be cited as Monteverdi's.

<sup>142</sup>Marini, Affetti musicali (Venice, 1617)

<sup>143</sup>Marini, Sonate, symphonie ... e retornelli (Venice, 1629)

<sup>144</sup>Buonamente, *Il quarto libro de varie sonate, sinfonie, gagliarde, corrente, e Brandi* (Venice, 1626)

<sup>145</sup>Merula, *Il secondo libro delle canzoni da suonare* (c1631–3; Venice, 2/1639)

<sup>146</sup>(Venice, 1615). There are 16 parts labelled 'violino', of which four go beyond c'''; three of these are in the G1 clef and have d''' as their top note, while the remaining one, evidently in the otherwise usual G2 clef, also has an e'''. Granted the loose terminology of the period and the youthfulness of the violin family in the early 1600s, one must at least consider the possibility that these parts were intended for Praetorius's 'Klein Discant Geig', tuned a 4th above the common violin (*Syntagma musicum*, ii, p.26 and *Theatrum instrumentorum*, pl.XXI). *Pace* D. D. Boyden ('Monteverdi's *Violini Piccoli* and *Viole da Braccio', Annales musicologiques*, vi (1958–63)), the 'violini piccoli alla francese' in Act II of Monteverdi's *Orfeo* could well be that instrument. However, Zacconi, in a slightly confusing passage

516 EARLY MUSIC NOVEMBER 1984



10 Vespers of 1610: Bassus partbook

(*op cit*, f.218), says that 'per artificio & giuditio' (through skill and judgement) the violin's range of a 17th can be extended by 'some' extra notes; it does not follow, though, that these notes would appear in compositions or even occur in performance (cf. Praetorius's exceptional low notes for the bass voice, above). (Similarly, Mersenne (*op cit*, p.179) observes that 'excellent violinists... can ascend each string up to the octave'.)

<sup>147</sup>Dario Castello, Sonate concertate in stil moderno ... libro primo (Venice, 1621) and libro secondo (Venice, 1629)

<sup>148</sup>[Merula,] Canzoni overo sonate concertate per chiesa e camera... libro terzo (Venice, 1637)

<sup>149</sup>Elsewhere Monteverdi writes down to C in the *bassus generalis*, too; the note was generally available on Italian organs of the time.

<sup>150</sup>See above and n.25.

<sup>151</sup>Kurtzman, *op cit*, p.71

<sup>152</sup>See H. S. Powers, 'Tonal types and modal categories in Renaissance polyphony', *JAMS*, xxxiv (1981), p.467.

<sup>153</sup>Monteverdi, Sacrae cantiunculae (Venice, 1582)

<sup>154</sup>See, for example, C. V. Palisca, 'The Artusi–Monteverdi Controversy', *The Monteverdi Companion*, ed. D. Arnold and N. Fortune (London, 1968), pp.133–66.

# In EARLY MUSIC

# February 1985

Jeffrey Kurtzman

# will add some reflections on pitch in Monteverdi's Vespers of 1610